

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service

PB-286 415

Environment Midwest February 1976 Through December 1976

(U.S.) Environmental Protection Agency, Chicago, IL Region V

Feb 76

TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

EPA Form 2220-1 (9-73)

INSTRUCTIONS

1. **REPORT NUMBER**
Insert the EPA report number as it appears on the cover of the publication.
2. **LEAVE BLANK**
3. **RECIPIENTS ACCESSION NUMBER**
Reserved for use by each report recipient.
4. **TITLE AND SUBTITLE**
Title should indicate clearly and briefly the subject coverage of the report, and be displayed prominently. Set subtitle, if used, in smaller type or otherwise subordinate it to main title. When a report is prepared in more than one volume, repeat the primary title, add volume number and include subtitle for the specific title.
5. **REPORT DATE**
Each report shall carry a date indicating at least month and year. Indicate the basis on which it was selected (e.g., *date of issue, date of approval, date of preparation, etc.*).
6. **PERFORMING ORGANIZATION CODE**
Leave blank.
7. **AUTHOR(S)**
Give name(s) in conventional order (*John R. Doe, J. Robert Doe, etc.*). List author's affiliation if it differs from the performing organization.
8. **PERFORMING ORGANIZATION REPORT NUMBER**
Insert if performing organization wishes to assign this number.
9. **PERFORMING ORGANIZATION NAME AND ADDRESS**
Give name, street, city, state, and ZIP code. List no more than two levels of an organizational hierarchy.
10. **PROGRAM ELEMENT NUMBER**
Use the program element number under which the report was prepared. Subordinate numbers may be included in parentheses.
11. **CONTRACT/GRANT NUMBER**
Insert contract or grant number under which report was prepared.
12. **SPONSORING AGENCY NAME AND ADDRESS**
Include ZIP code.
13. **TYPE OF REPORT AND PERIOD COVERED**
Indicate interim final, etc., and if applicable, dates covered.
14. **SPONSORING AGENCY CODE**
Leave blank.
15. **SUPPLEMENTARY NOTES**
Enter information not included elsewhere but useful, such as: Prepared in cooperation with, Translation of, Presented at conference of, To be published in, Supersedes, Supplements, etc.
16. **ABSTRACT**
Include a brief (200 words or less) factual summary of the most significant information contained in the report. If the report contains a significant bibliography or literature survey, mention it here.
17. **KEY WORDS AND DOCUMENT ANALYSIS**
 - (a) **DESCRIPTORS** - Select from the Thesaurus of Engineering and Scientific Terms the proper authorized terms that identify the major concept of the research and are sufficiently specific and precise to be used as index entries for cataloging.
 - (b) **IDENTIFIERS AND OPEN-ENDED TERMS** - Use identifiers for project names, code names, equipment designators, etc. Use open-ended terms written in descriptor form for those subjects for which no descriptor exists.
 - (c) **COSATI FIELD GROUP** - Field and group assignments are to be taken from the 1965 COSATI Subject Category List. Since the majority of documents are multidisciplinary in nature, the Primary Field/Group assignment(s) will be specific discipline, area of human endeavor, or type of physical object. The application(s) will be cross-referenced with secondary Field/Group assignments that will follow the primary posting(s).
18. **DISTRIBUTION STATEMENT**
Denote releasability to the public or limitation for reasons other than security for example "Release Unlimited." Cite any availability to the public, with address and price.
19. & 20. **SECURITY CLASSIFICATION**
DO NOT submit classified reports to the National Technical Information service.
21. **NUMBER OF PAGES**
Insert the total number of pages, including this one and unnumbered pages, but exclude distribution list, if any.
22. **PRICE**
Insert the price set by the National Technical Information Service or the Government Printing Office, if known.

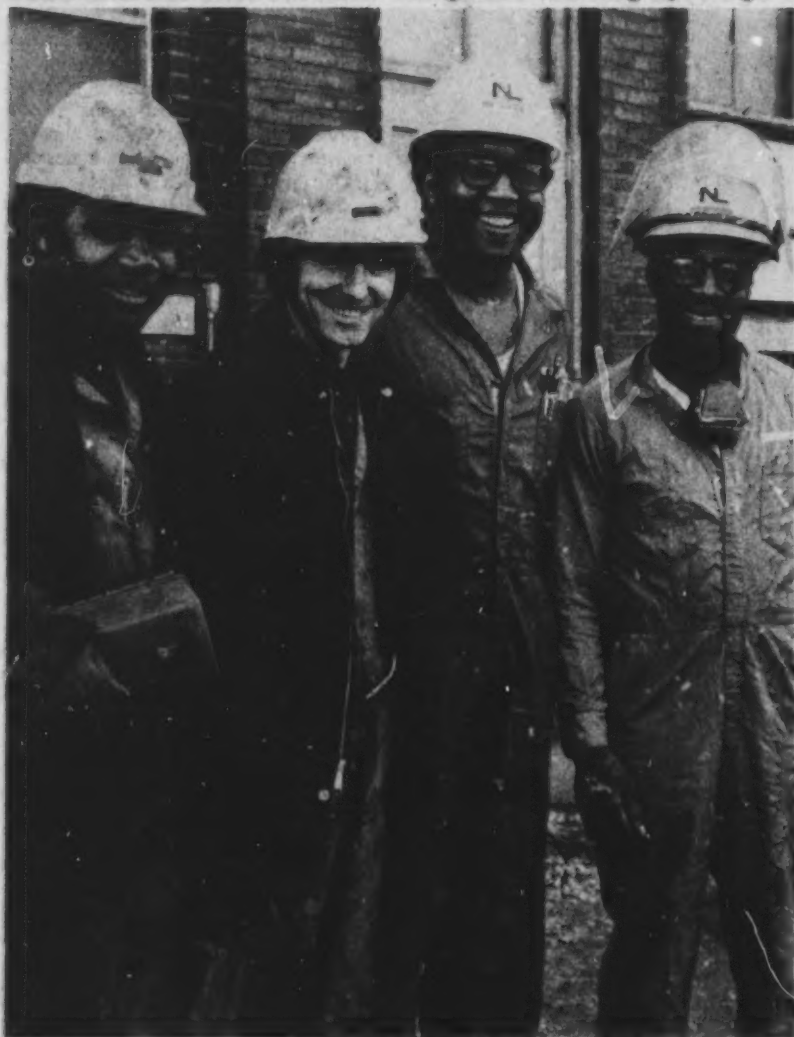


Environment Midwest

REGION V
UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY

FEBRUARY 1976

Jobs and the environment: things are looking up. Page 3



(Photo courtesy United Steelworkers of America)

**Lake Michigan
Federation
Page 7**

**(Re)cycling at
North Shore
Ecology Center
Page 8**

**Briefs
Page 10**

Budget reduction won't affect most programs

The recently-announced EPA proposed operating budget for FY77 is \$53 million less than the current budget, but Administrator Train feels that the cuts notwithstanding, the Agency will be able to continue most of its programs at current levels. The proposed budget also offers increases in some high-priority programs.

The 1977 budget totals \$718 million as compared with the \$773 million for this year, but provides for a significant increase of \$10.6 million in the water supply program. This doubles the FY76 level of grant funding to states to assist them in assuming primary enforcement responsibility for state drinking water supply and underground injection control systems. About 41 states are expected to assume this responsibility by the end of FY77, the administrator noted.

On the other side of the coin, the biggest decrease is in the request for \$178 million for the water quality program--almost \$60 million less than the 1976 current estimate.

The new budget calls for the reprogramming of more than 100 positions from Headquarters to the regional offices to increase the regional air, water quality, and water supply efforts. The administrator noted that these shifts reflect two basic principles followed in the development of this year's budget: the continuing policy of decentralization, shifting EPA resources away from headquarters to the field whenever possible; and the policy of reprogramming existing resources to meet the agency's priority requirements.

In other areas, pesticides abatement and control resources will be cut by \$5.3 million. The reduction is due primarily to



Francis T. Mayo

the phaseout of funding for the joint EPA/USDA-Extension Service applicator training program, which will be substantially completed in FY76. An increase of \$1 million has been requested for pesticides enforcement, however, to enlist state support in the enforcement of pesticides control legislation by providing grant funding for state cooperative enforcement agreements.

The research and development program budget of \$159.4 million reflects a \$7 million reduction from the FY76 level. Nevertheless, the agency shall continue its R&D efforts in such key areas as the correlation between air pollution exposure and cancer incidence, the development of new techniques for the purification of drinking water supplies, and the development of new water supply quality assurance techniques.

The energy research and development program budget of \$97 million is \$3 million less than the FY76 appropriation. The agency, notes Administrator Train, will continue its activities to insure that new energy technologies are environmentally sound and that implementation of advanced techniques is not delayed due to lack of data on environmental effects.

Also, the 1977 radiation research program is down from FY76; the budget proposal is \$900,000, reflecting a reduction of 20 positions and \$800,000. The program will be mainly directed to the study of nonionizing radiation. EPA plans to capitalize on the ionizing radiation research conducted by the Energy Research and Development Administration and the Nuclear Regulatory Commission, as well as the extensive body of knowledge developed during the past 25 years.

Environment Midwest is a monthly newsletter published by the Public Affairs Office, Region V EPA, 230 S. Dearborn, Chicago, Ill. 60604.

Francis T. Mayo Administrator
Valdas Adamkus Deputy Administrator
Frank Corrado Public Affairs Director
William Omohundro Editor

Environment/ job situation: cautious optimism

Working people are used to bad environments. If you've ever tried to breathe the air in a foundry or worked on top of a coke battery or had to put up with the noise in a machine shop or gone down into a mine, you've got a pretty good feel for environmental problems. As Franklin Wallick of the United Auto Workers has written in his book, "The American Worker: An Endangered Species," "Pollution on the job is a microcosm of pollution everywhere."

But workers don't leave it at work. Most times the pollution follows them home. "When it's hot, I like to come home and sit on the porch for awhile and have a drink," says John Sherer, a steelworker from Cleveland's 'Flats.' "But I can't, not with that rotten air out there."

And yet in spite of all this, many workers value the paycheck more than their health or that of their family. "You gotta eat," they observe pragmatically. And there is no question pollution controls have indeed been responsible for some plant closings.

The issue -- "environment versus jobs" -- has been the Achilles heel of the environmental movement almost from the beginning. Pollution is a tough issue. It's like smoking cigarettes; everybody knows it'll do you in eventually, but the immediacy of 2,000 men being put out of work at Reserve Mining or at some steel plant, there's the stuff network newscasts are made of.

But recent developments show that while some jobs have been lost because of environmental demands, the number of jobs created by the environmental movement have matched or exceeded those lost.

In a recent EPA quarterly report to the Department of Labor on economic fallout from antipollution measures, Deputy Administrator John R. Quarles said that in the past five years, (January 1971 through September 1975) actual closing or curtailments of production in 75 plants have resulted in the loss of approximately 15,000 jobs.

But those who want to cite such statistics as reason to delay or abolish environmental statutes should realize that far more jobs were lost through normal industrial obsolescence, Quarles said.

More to the point, those 15,000 jobs have been mostly offset by the creation of a new industry devoted to the production, installation and operation of antipollution equipment, he added.



Environmental factors don't eliminate that many jobs.

Another study, done by a firm of Wall Street analysts for the Council on Environmental Quality and released this past December, showed that environmental legislation over the years has generated an industry employing 1.1 million workers.

Additionally, the multiplier effect of \$3.6 billion in EPA grants to state and local governments through FY75 for wastewater treatment plants has been another strong economic stimulant. Manpower studies indicate that each billion dollars in construction grant funds generates 20,000 year-long, on-site jobs and an equal number of jobs in the industries that produce materials for such plants, as well as those that transport the materials to the site.

Said Quarles, "By the most conservative estimate, grants made during the past year will generate well over 100,000 jobs."

Recently, 719 jobs were made available to recipients of aid to dependent families in seven states -- Colorado, Connecticut, Louisiana, Maryland, Montana, South Carolina and Texas. The jobs were created with \$1 million provided to EPA by the Department of Labor and included such functions as operation wastewater treatment plants, servicing water meters and pesticide control technicians.

Of course, the picture isn't 100 per cent rosy. The EPA economic dislocation report listed two dislocations during the June-September 1975 period, for example. One was the shutdown of part of a steel plant in Birmingham, Alabama, the other involved the closing of a cast iron soil pipe foundry in Tyler, Tex.

The report noted that the closing of the foundry was due primarily to "a poor marketing outlook because of an increase in the use of plastic pipes." The foundry's entire workforce of 600 was dismissed. The Birmingham cut-back due to air pollution regulations resulted in the loss of 300 out of 12,000 jobs.

"In most cases," said a letter from EPA Administrator Russell Train accompanying the report, "pollution controls were but one of a number of factors involved in management's decision to discontinue operations. Other factors appeared to be outdated facilities, marketing problems, and OSHA (Occupational Safety and Health Administration) regulations."

Still another report, "The Economic Impact of Pollution Control," said in detailing the cost of pollution cleanups that they would involve no more than one per cent of the job force. Issued four years ago, the study predicted that, "Direct job loss attributable to environmental regulations in the affected industry activities examined may range from 50,000 to 125,000 jobs over the 1972-76 period. These figures represent approximately 1 to 4 per cent of total employment in the industry activities studied."

The direct average annual unemployment created in these industries represents .05 per cent of the 1970 total national work force. However, the study also noted that these estimates could be substantially higher if the economy is not at full employment.

Obviously, that last statement has come true, leading to the serious local repercussions the study predicted. In Waterloo, Iowa, the Headford Brothers and Hitchins Foundry closing nine months ago was the result of OSHA

and air pollution control requirements. In that instance, EPA's Early Warning System (EWS) designed to soften any loss of jobs as a result of plant closings, reported a layoff of 70 people.

Set up in 1971, EWS employs a person in each of EPA's 10 regions to report on a quarterly basis to Washington any impending plant or factory closings. The agency passes such information to the Department of Labor and the Small Business Administration.

Hopefully, workers either can be relocated or the operation may secure a loan from the SBA to stay open.

Another situation involved an Armour Company meatpacking plant in Mason City, Iowa, but was much more complicated than the Waterloo shutdown.

Before it finally closed about a year ago, the Armour operation was apparently beset by numerous problems: they needed expensive air pollution abatement equipment on their boilers to meet SIP requirements; they were faced with high user charges at the municipal treatment plant; large investments were needed to bring the old plant up to OSHA standards; they were having trouble meeting Food and Drug Administration sanitation regulations; the shift from a slaughtering to a processing operation when it was bought by the Greyhound Corporation had hurt business; and last, the plant was reportedly having severe labor relations problems.

Up to the time of the closure, the State Air Quality Control Board and the company were engaged in active negotiations, and there was some feeling that the air problem could be resolved. It also appeared the Iowa AQCB was willing to stretch out the compliance period to allow more time for the company to work out funding problems. The eventual loss of 1,200 jobs resulted from the conflict between management and the unions, according to EPA officials, so the shutdown was not listed as an environmentally-necessitated closure.

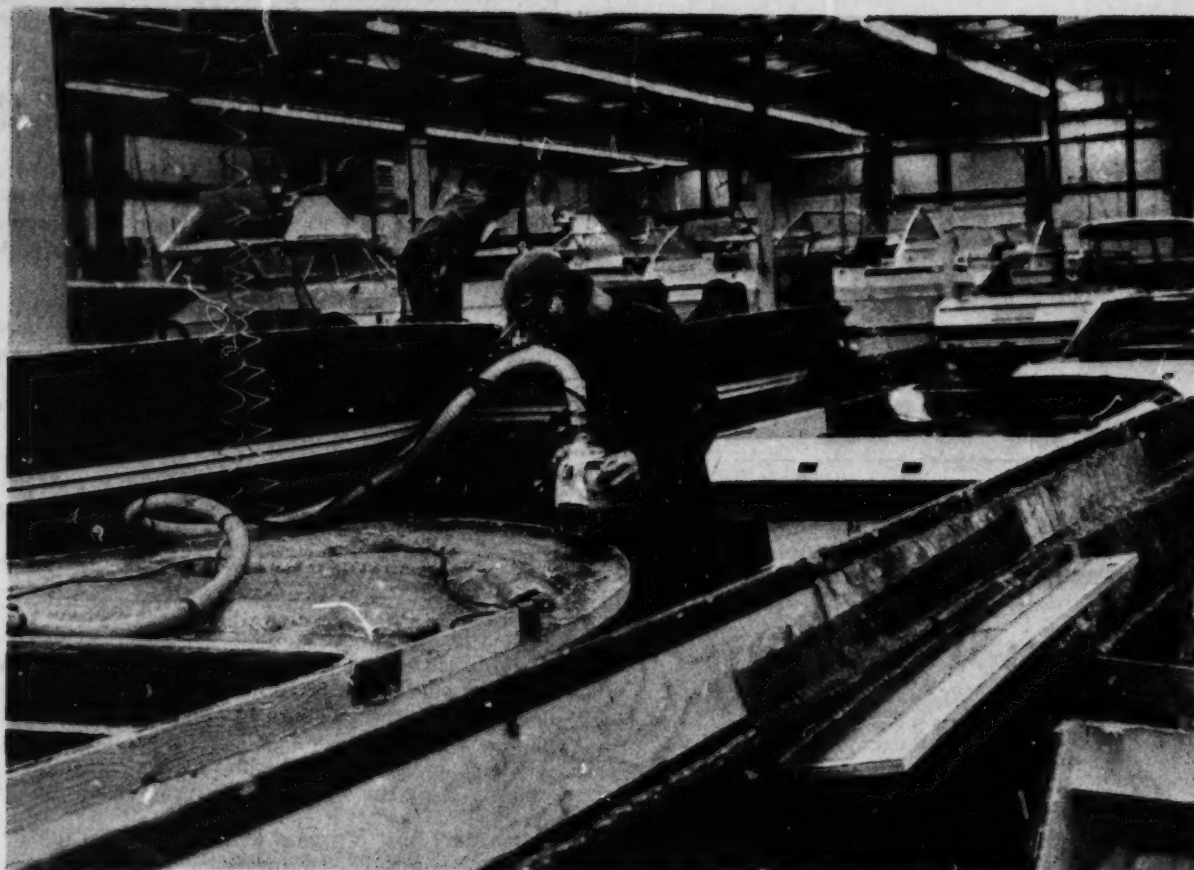
Closer to home, a number of close calls on the environment-jobs issue have taken place in Region V during the past five years.

Two operations in the Duluth, Minn., area have received attention. In one instance, the State attempted to bring about the cleanup of some rather old mills operated by U.S. Steel. While the State did grant extensions for cleanup, the company decided to close down most of the plant and let 1,200 employees go.

The second operation involved the Reserve Mining Company plant in Silver Bay, where more than 2,000 workers were briefly idled after a Federal judge ordered the plant shut down for health reasons in April 1974. Although an appeals court quickly reopened the plant, concern for the fate of Silver Bay, strictly a company town, became nationwide.

In December 1974, U.S. Steel in Gary, Ind., warned that up to 4,000 jobs would be lost because of an EPA order to close down its open hearth no. 4. When all the dust had settled, however, the final job loss was far less.

One of the most difficult situations remaining is in Ohio's Mahoning Valley, where a number of old steelmaking facilities keep 25,000 workers employed. EPA and the State of Ohio have made a special exception for this area so that less than national standards may be finally required, thus preserving jobs.



(Photo courtesy United Steelworkers of America)

Although some workers have lost their jobs, overall they have been supportive of environmental goals for years.

In other large industrial areas like Green Bay, Wis., and Cleveland and Steubenville, Ohio, employers have warned of job losses if environmental standards are enforced. In October 1975, EPA enforcement director Jim McDonald faced a hostile convention of the International Paperworkers Union in Madison, Wis. The 500 gathered members were deeply concerned about possible loss of their jobs.

But overall, workers have long been supportive of environmental goals. The AFL-CIO, the United Auto Workers, and the Oil, Chemical and Atomic Workers Union have been in the forefront of the battle for strong national clean air and water goals.

John Swearer, who lives in Cleveland and serves on the anti-pollution committee of the United Steelworkers, says that polluting companies cite lack of funds, unavailable equipment, and need for time extensions as reasons why they just can't comply with environmental standards.

"And if all these excuses fail," said Swearer, "their final word is 'We won't comply, we'll just shut down'." He added that, "This is beginning to wear a little thin."

Testifying at a hearing on sulfur oxide standards in Ohio this past January, Charles Gilli, representing the United Mineworkers of America, told a Steubenville, Ohio, au-

dience he believes that a "fear campaign" over jobs has been launched in that state that tries to "take full advantage of the natural worries of men and women during times of economic distress."

He called for the use of scrubbers on power plants throughout the state to allow continued use of high sulfur coal from Ohio mines.

Other labor leaders, such as Ed Sadlowski, United Steelworkers District 31 director in Gary, agree that EPA isn't always the villain every time a job is lost to environmental demands.

When U.S. Steel closed that open hearth no. 4 rather than face fines for its continued operation, Sadlowski said the blame for the jobs that were lost was the company's, not EPA's, since many extensions for clean-up had been given.

More recently, when USS was forced to shut down three aging, polluting coke batteries during Christmas week (resulting in the reported loss of 200 jobs), board chairman Edgar Speer sent a telegram to President Ford. Speer told the President the situation shows the federal government "continues to show no compassion for the needs of the working man."

Sادلowski, however, retorted that, "If their real worry

"It's not that we don't want to obey. We would like to do so, but in an orderly fashion. But we have to survive."

is for the working man, why didn't they clean up the coke ovens a long time ago? That's when they should have shown some concern for the health of the coke oven workers."

Like many of his peers, Sadlowski feels that the problem of industrial pollution goes well beyond the issue of the economy, jobs or politics.

"What we need is a sort of social revolution and a change in the ways people think about work. I think the idea of a shorter work week is a good one; people would have more leisure time and we could spread the work around a bit," said Sadlowski.

In general, although businessmen complain about the capital burden involved in pollution abatement, most agree with the intent of the environmentalists. Said one corporate officer, "It's not that we don't want to comply. We would like to do so, but in an orderly fashion. The compliance has got to dovetail with all sorts of other priorities--like survival."

Still, it's hard to get around that CEQ study and those 1.1 million jobs. The authors, Kenneth Leung and Jeffrey Klein, concluded that, "When all the factors are considered, there seems to be an outright economic advantage to pollution control."

CEQ Chairman Russell Peterson added that, "We are looking for jobs in America so it is important that we stimulate activities that create jobs. The clearly-expressed desires of our fellow citizens for clean air and water, less noise and waste provide such a stimulus. Enterprises that fill these needs can be among the most productive in the economy, protecting our health and prosperity, saving valuable resources and adding esthetic quality to our lives."

One thing that can go a long way towards fulfilling Peterson's words is better understanding among management and union leaders, environmental and consumer groups and citizens actions committees. Towards that end, the United Auto Workers is sponsoring a planning conference at its Black Lake Conference Center in northern Michigan May 2-6.

Entitled "Working For Environmental and Economic Justice and Jobs," the affair hopefully will draw upwards of several hundred members of the groups just mentioned to increase understanding among themselves. One of the questions they will explore is whether or not it is possible to protect both the environment and jobs, or make new jobs to replace any that may be lost.

The conferees also will discuss a particularly thorny issue, whether existing or future environmental regulations will destroy any chance those on the lower end of the social or economic ladder have of bettering themselves.

Lee Botts, Region V Assistant for Congressional and Intergovernmental Relations, will represent the region at the five-day seminar and emphasizes that it is open to anyone.

"It isn't necessary for a person to be a labor or management official or even a member of a specific group," she said. "All one has to do is be interested and concerned about the topics we're going to discuss." Persons wishing to attend the gathering should write the United Auto Workers, Conservation Dept., 8000 E. Jefferson Ave., Detroit, Mich. 48214 for reservations and more information.

'Great Lakes Tomorrow' hopes to turn things completely around

Its offices aren't really what you could call impressive. Most of the walls are plastered with dog-eared maps featuring a large body of water, giving the place a somewhat tacky look. But don't be fooled by appearances. Just try to mess around with Lake Michigan (or any of the other Great Lakes for that matter) and they'll be all over you.

"They" is the Lake Michigan Federation, a private, non-profit organization dedicated to preserving its namesake. Hereafter called the "LMF," the group was born in September 1970 in response to the growing environmental concerns

of the Federal government and general public.

Far and away the biggest thing going right now at the Federation is "Great Lakes Tomorrow," a three-year project designed to help the public get involved in the government planning for the future of all the Great Lakes.

"In the past, most of the 'action' has been in reaction to events that LMF felt threatened the lake--like thermal pollution, PCBs and erosion. The purpose of Great Lakes Tomorrow is to reverse this situation and promote public action to plan for the future. That's the only way

to assure long term protection for the lakes."

The speaker is Richard Robbins, executive director of the LMF, a youngish, bearded individual who sports horn-rimmed glasses and grows his own vegetables in his backyard. No stranger to environmental issues (he is an environmental lawyer and electrical engineer), Robbins assumed the directorship a few days before Christmas, replacing Lee Botts. Mrs. Botts, only other executive director the Federation has had, left to become the EPA Region V Assistant for Congressional and Intergovernmental Relations.

Great Lakes Tomorrow will be carried out in three overlapping stages: development and organization, participation in planning, and a regionwide referendum. During the first phase which began September 1, important policy issues have been identified and a communications network has been organized among citizen groups and other interests. Citizen task forces have been set up for each of the Great Lakes, including representatives of Canadian interests, and financial support developed.

"One problem," Robbins continued, "is that the Federation lacks funds for the immediate future while we develop Great Lakes Tomorrow, although the long-term prospects are outstanding."

Financial roadblocks notwithstanding, the program is continuing apace--the most significant issues were identified at a workshop last October in Racine, Wis., co-sponsored by the LMF and The Institute of Ecology, the latter a collection of more than 100 scientists from research and academic institutions in the Western Hemisphere.

The meeting was attended by more than 75 citizens, scientists and government officials, and much of their time was devoted to assessing current and past work of the Great Lakes Basin Commission. That body, founded in 1968, is the regional planning agency established by Presidential order as a "river basin" commission under the Water Resources Planning Act of 1965.

"One of the things we've accomplished is to get better public participation in the commission's meetings," Robbins said. In the past, for one reason or another, that participation was at a low ebb."



An environmental lawyer, Robbins grows vegetables in his back yard.

Second phase of Great Lakes Tomorrow-participation in planning--will cover almost two years, from now until 1978. Using results of research by The Institute of Ecology, the LMF will publish reports on probable long term consequences of recommendations of the Great Lakes Basin Commission and possible alternatives. The significance of the findings will be disseminated through the citizen task forces, as well as through a region-wide information service to be established by the LMF.

Said Robbins, "During this stage, we will continue to monitor the commission's activities and to report on its policy recommendations. Additionally, we will let our members know about development projects and proposals related to the commission's policies."

The final six months of Great Lakes Tomorrow, beginning in the spring of 1978, will be devoted to obtaining a public response throughout the region to the Commission's Comprehensive Plan for the next 50 years.

"Although a referendum in the sense of a formal vote is not possible, we hope that TV stations, newspapers and radio stations will be stimulated to inform the public about the plan," Robbins continued.

"Also, we will be developing materials for use in secondary schools and colleges, and for civic and community organiza-

tions. Our hope is that those civic and community groups in turn will convince government agencies and legislators to take more interest in planning issues and the public's response to proposed policies."

As involved a project as it is, Great Lakes Tomorrow isn't the only iron in the LMF fire.

"We're moving into the solar energy field," Robbins said, adding that, "we are also working to change the laws relating to the environment. That is a tremendous task, of course, and really a never-ending one."

"We are monitoring state coastal zone management programs from the consumer standpoint, and this spring will conduct eight citizens' workshops on public access and recreation around the lake."

LMF additionally will conduct educational programs in hazardous waste disposal programs.

The Federation's basic structure is divided into four major areas of service: information and education; stimulation of citizen action dealing with decisions affecting Lake Michigan; influencing the government decision-making process; and consumer "watchdogging."

Under one or more of those basic areas, LMF performs such diverse tasks as furnishing educators and educational institutions with information and

materials, dispatching citizen "alerts" telling when and where to comment on public policy decisions and pending legislation, representing the public interest by participating in hearings and proceedings before government agencies, and by maintaining a network of sharp-eyed organizations and individuals who report periodically on lake and shoreland conditions.

It serves the four states surrounding Lake Michigan (Illinois, Indiana, Michigan and Wisconsin) and has grown rapidly to its present size of about 200 citizens organizations and nearly 10,000 total members. LMF is supported by foundation grants, individual contributions and membership dues, and in addition to Robbins employs a professional staff and several knowledgeable volunteers.

Robbins was deputy director and general counsel of LMF from January 1975 until moving into the top slot. Before joining the Federation he spent 18 months as a special assistant to former New York City Mayor John Lindsay, handling transportation and environmental problems. He also spent three years with Landguard Trust, a Maine environmental group, advising them on sound environmental land uses. As he views the Federation, "We have our fingers in a lot of environmental pies and intend to keep them there."

(Re)cycling a major goal of North Shore Ecology Center

Someday, you may be able to do your daily exercises and provide electricity for your TV set at the same time. Or zip along on an electric tricycle that gets the equivalent of 100-150 miles per gallon of gas.

The two low-energy projects were developed and are now undergoing testing by the North Shore Ecology Center, headquartered about 25 miles north of Chicago's Loop in Highland Park, Ill. Actually, they are just a segment of the center's many activities, focused primarily on recycling solid wastes in Highland Park and several surrounding communities.

A non-profit organization, NSEC was founded about five years ago. In 1974, it took over the defunct Lake Forest/Lake Bluff center, rejuvenating it enormously. Together, the two centers remove well over 1.5 million pounds of

material from the area's waste stream.

Says President Sol Levine, "One of our biggest projects at the moment is building an extensive file on energy, energy-saving tips and alternate energy sources, besides working on low-energy projects like the tricycle and the bicycle-TV mechanism."

Although it looks complicated, the bicycle generator is simply an automobile generator mounted on a converted bicycle and driven by human force that charges a 12-volt battery. The battery provides power to run a low-watt, portable black and white TV set.

"In case anybody is wondering," said Levine, "you couldn't use the device to power a 25-inch color console, unless of course you're some kind of superman. But it does save about 300 kilowatt hours of electricity per year, as well as providing a healthy incentive to exercise."

The center's other project, the electric-powered tricycle, is a cooperative effort with the Flying Zeemo Electric Bicycle Co. in Chicago. It is possibly one of the lightest utility vehicle replacements for the auto for in-town, short-range trips to the supermarket, barber shop, beauty parlor, etc.

"It's powered by a 12-volt battery and motor and recharged with a 110-volt battery charger," Levine continued. "What's nice about it is that it consumes no energy at all while waiting for a stoplight, it begs for no foreign oil and, if you convert the amount of electrical energy used for recharging its battery to 'gallons of gas,' delivers about 100 to 150 miles per gallon depending upon weather conditions."

The tricycle reaches speeds of about 10 miles per hour and can be pedaled to assist the motor up hills or if the battery



Here's the easy way to watch your favorite television program and get plenty of good exercise at the same time.

should ever fail.

Although NSEC officials hope the two projects eventually will end up in millions of homes, their primary concern now are recycling centers around Highland Park and the Chicago metropolitan area. Numerous centers have gone out of business, said Levine, primarily because "The market for recycled products has been steadily diminishing.

"One of our biggest items was paper for recycled newsprint, but that market has fallen at least 50 per cent. Demand for other products such as paper for packaging and metals for use in new autos has declined just about as badly."

Perhaps the most far-reaching effect of a recycling center closure is the undoing of good intentions and habits people have developed. After cultivating the habit of saving valuable natural resources, they have no outlet for their resources and intentions except the garbage can. And the fact the Highland Park area is facing an imminent landfill crisis hardly makes the situation any better. Some of the landfill areas are due to close within a year; new

space is extremely difficult to find.

"The average Chicago area suburban family fills almost five garbage cans a week," Levine continued. "This could be cut to three cans just by recycling newspapers and non-returnable bottles. You can see how much we could cut down on landfill waste disposal substantially if everybody recycled just bottles and newspaper."

The NSEC, Levine said, is devoting the thrust of its current operations towards educating people to separate paper and glass at home before they become contaminated by other materials in the back porch garbage. Thus, the use of complex and costly disposal systems that use large quantities of energy to retrieve what could have been kept separate by the consumer in the first place can be substantially reduced.

The center strongly believes that in-home separation will be a prominent part of future resource recovery techniques, together with composting, burning of waste for fuel, and packaging legislation to reduce waste.

"That's why we consider it imperative that all existing recycling centers in the north suburban area not only be maintained, but their efforts maximized to involve and educate people to the need for recycling."

To accomplish this, the NSEC strongly feels that recycling centers should become a united force to acquire the power to negotiate effectively with the difficult markets they must deal with.

"We're willing to commit a large part of its monies to make sure recycling does not fail--that it expands," said Levine. He added that NSEC intends to donate the initial funds necessary to hire a full time director of recycling to oversee operations of all the centers who might wish to join in its efforts.

"The money will be used to provide for long range salaries and for carrying non-profitable centers through periods of fluctuating prices and markets for waste materials," Levine noted. Or in other words, he feels there's safety in numbers.



Shhhh! Grand Rapids observes 'Quiet Day'

You don't have to tiptoe through Grand Rapids, Mich., on Quiet Day, but townspeople won't appreciate your making a lot of racket, either.

The observance began in 1974 when city fathers decided the future of the environment was not tied so much to court action as to the attitudes and awareness of the populace. The result was a proclamation by Mayor Parks naming September 27 the first annual "Quiet Day in Grand Rapids, Michigan."

Primary goal of the observance was to increase citizens' awareness of noise pollution and the need for its abatement. The Committee on Noise, composed of government officials, educators, audiologists, motorcycle dealers, police officers and an acoustical engineer, took responsibility for the development and execution of Quiet Day.

From the original idea of a low-keyed program, Quiet Day eventually emerged as a multi-faceted one, so much so that the committee decided to set aside Riverside Park in Grand Rapids for the day's activities.

Before the day was out, scores of citizens had brought their autos in for noise level tests by the Grand Rapids Environmental Protection Department, and also took free hearing tests administered by a local audiologist.

City officials conceded it was difficult to accurately measure the success or effectiveness of a program such as Quiet Day. However, they noted that area schools displayed a marked interest in noise pollution and what they could do about it. More than 25 of them asked the Grand Rapids EPA to provide speakers to discuss noise abatement.



EPA registers 1st naturally occurring insect virus

For the first time, an insecticide made from a naturally-occurring insect virus has been registered by EPA, meaning the product has met extensive test requirements for safety and effectiveness.

It is approved for use against two highly destructive cotton pests--the cotton bollworm and tobacco budworm. The virus is naturally present in those two insects and tests have shown that it pre-

sents a minimal hazard to persons applying the insecticide.

The virus product also appears to have no adverse effects on beneficial insects, birds or other wildlife that help keep other cotton pests under control. This "specificness" of the insecticide is a major environmental advantage over chemical pesticides approved by EPA for cotton use.

Other environmental benefits are that the insecticide becomes harmless shortly after application and that it is not capable of building up in the bodies of birds or other wildlife that might eat the treated bugs.

The insecticide is produced by raising diseased bollworm and budworm insects in a laboratory then extracting the virus and mixing it with other materials. It may be applied by either ground equipment or airplane.



Judge Devitt takes over Reserve Mining Co. case

The chief federal judge in Minnesota, U.S. District Judge Edward J. Devitt, has been assigned responsibility for the controversial Reserve Mining Company case by the U.S. Eighth Circuit Court of Appeals. He replaces Judge Miles Lord.

Judge Lord had assumed jurisdiction in March 1972, shortly after the federal government sued Reserve in an attempt to stop the company from discharging an estimated 67,000 tons of taconite processing waste a day into Lake Superior from its plant at Silver Bay, Minn.

In remanding the case to Judge Devitt, the appeals court, sitting in St. Louis, pointed out a number of issues that have to be resolved. These include supervision of conflicts concerning abatement of air and water pollution; consideration of new medical or scientific studies that may require reevaluation of the health hazard attributable to Reserve's discharge from its taconite processing plant; assessment of fines and penalties against Reserve; and damages arising from the cost of interim abatement or water filtration to lake communities.

An additional issue might be whether the federal government seeks relief if the state and Reserve are not moving with "deliberate speed" to end the company's discharge into the lake and air pollution from its plant.

The appeals court ruling almost certainly does not allow Judge Devitt to consider what the EPA says is a potentially dangerous problem. That is, whether air pollution from an on-land

site may not, in fact, be more dangerous to health than the discharge into Lake Superior. The Agency has said that more information is needed on the potential hazard of "fugitive dust"--injurious asbestos-type fibers--blowing off an on-land disposal site.

A former Republican congressman from St. Paul, Judge Devitt was appointed to the federal bench by President Dwight Eisenhower in 1954.

Wisconsin University offers environmental films, slides

Nine films and three slide sets on environmental topics pertinent to the Midwest are available from the University of Wisconsin.

Three of the films (Lake Renewal Techniques; Shoreland Development--A New Approach; The Marion Millpond Story) show techniques and concepts to protect water quality and shoreland around inland lakes. Another (Lake Superior--The Region Until Now) is a look at the economic geography of the Lake Superior area, including sections on water quality and resource management.

A review of typical air pollution sources (Wisconsin's Air) looks at some of the ways the state is working to improve air quality, while the remaining three films (Of People, Land and Planning; Land Use at Interchange Areas; Bayfield--The Face of a Community) deal with a wide variety of land use and urban and regional planning issues.

The slide sets, each with accompanying cassette tape narration and script, discuss Wisconsin Wetlands, Regional Planning in Wisconsin, and Protecting Wisconsin Farm Land.

Both the films and the slides were written with local government leaders and civic groups as intended audiences, but are also suitable for high school and college classes. Films may be rented or purchased, while the slide sets are for purchase only.

All are available by writing University of Wisconsin-Extension, Bureau of Audio-Visual Instruction, P.O. Box 2093, Madison, Wis. 53701.

Great Lakes Basin pollution abatement grants skyrocket

Grants made for water pollution abatement in the Great Lakes Basin in 1975 were nearly double that of 1974. Funds obligated in the United States during 1975 under Public Law 92-500 for planning, building, improving or expanding wastewater treatment facilities in the basin totaled approximately \$900 million. They totaled only \$509 million in 1974; \$419 million in 1973; and \$225 million in 1972.

Jurisdictions receiving substantial federal grants in 1975 included:

Indiana: Gary, \$8,227,575.

Michigan: Detroit, \$105,236,250; Pontiac, \$11,102,250; Berrien County, \$32,805,300; Wyandotte-Southgate, \$40,973,250; Grand Rapids, \$16,648,650; Jackson County, \$14,603,580.

Minnesota: Western Lake Superior, \$44,256,225.

Ohio: Cleveland Regional Sewer District, \$87,018,825; Oregon (Lucas County), \$13,643,100; Medina County, \$15,639,300; Lucas County, \$8,361,300; Summit County, \$19,775,250; Geauga County, \$7,606,050.

Wisconsin: Appleton, \$19,060,275; DePere, \$19,472,475; Superior, \$5,364,900.

New York (Region II): Amherst, \$60,997,222; Rochester, \$18,597,787; Northwest Quadrant Pure Waters District, \$12,164,876; Fredonia, \$7,822,500.

Final regs limit sewage discharge into U.S. waters

EPA recently issued final regulations limiting the discharge of sewage from vessels into U.S. waters. The program applies to more than 600,000 U.S. boats and ships and all foreign vessels entering U.S. waters.

The regulations apply to "new" vessels on Jan. 30, 1977 and to "existing" vessels three years later. A "new" vessel is defined as one on which construction began on or after Jan. 30, 1975.

Under the final regs, sewage may not be discharged into landlocked freshwater lakes, reservoirs and other freshwater impoundments, or into rivers not capable of being used for interstate travel by vessels equipped with marine toilets. Vessels in such waters will have to retain their sewage onboard in Coast Guard-certified holding tanks to be pumped out for treatment ashore.

EPA's program is essentially the same as that proposed by the Agency in the Federal Register of Oct. 10, 1975. It forbids any overboard discharge of sewage into most freshwater bodies within each state. It also requires that wastes meet rigorous standards of treatment before being discharged into coastal and interstate waters. In addition, the 1972 Water Pollution Control Act provides means for the designation of other specific waters within a state to be "no-discharge" areas.

Water pollution control chiefs to softpedal time schedules

Michigan water pollution control officials say they will take "the cooperative approach" to setting time schedules for compliance by Great Lakes commercial vessels with no-discharge sewage regula-

tions, recently approved by EPA.

While the state's wastewater holding tank regulations under the 1970 watercraft pollution control law have been met by most recreational craft, the majority of some 400 commercial vessels plying the Great Lakes have awaited final adoption of federal regulations, which some expected to be less stringent.

Administrator Train recently notified Gov. William G. Milliken that his petition for no-discharge rules for watercraft in all Michigan waters had been approved. The federal agency certified that the state's 200 shoreline pumpout facilities and state-approved septic tank hauling operations were adequate to serve all watercraft and gave the state the green light to enforce the law immediately.

"We have no intention of issuing citations to commercial vessels not in compliance now," says William G. Turney, chief of the Bureau of Water Management, Department of Natural Resources.

"We are scheduling meetings with the vessel owners and will make every effort to help them develop wastewater retention system plans to meet state requirements. Individual achievement schedules will have to be worked out with the vessel owners because each of the big boats have different and sometimes complex design problems."

\$1.5 Million in grants given to clean up polluted lakes

Federal grants totaling almost \$1.5 million have been awarded to help clean up polluted lakes in Minnesota and Wisconsin.

According to EPA Administrator Russell Train, "The new grant program can make a significant contribution to restoring and protecting the nation's lakes, which are among our most vital resources."

The Minnesota lakes and the approved grants for each are: Albert Lea, \$302,800; and Minneapolis Chain of Lakes, \$179,000. Those in Wisconsin are Mirror/Shadow, \$215,000; White Clay, \$107,200; Lilly, \$273,000; and Half Moon, \$371,500.

The grants are part of a \$2.1 million package that will also help restore lakes in Florida, New York, South Dakota and Washington.

Michigan Dunes Area closed permanently to motor traffic

The Nordhouse Dunes Area in Mason County Mich., will be permanently closed to motorized traffic effective this spring. Located in Grant Township about midway between Manistee and Ludington, the area was used extensively by off-road vehicles prior to its closure for study in October 1973.

According to Kenton P. Clark, forest supervisor for the Huron-Manistee National Forests, four alternatives for managing the area were established during the two-year study. They ranged from walk-in use only without trail development, to development of an ORV recreation area with area and number of users regulated. They were rated against management objectives for the area, the most important of which were public safety and maintaining the dunes' character.

Other objectives included effects on plant and animal communities, supply and demand for dune uses, disturbance to adjoining landowners and development costs.

Present plans for development of the area include a parking lot near the end of Nurnberg Road, and toilet and garbage collection facilities. Foot trails will also be developed.

Persons desiring more information about the decision should write the Forest Supervisor, Huron-Manistee National Forests, 421 S. Mitchell St., Cadillac, Mich. 49601. Copies of the EPA report summary were scheduled to be available by Feb. 1 at major public libraries throughout Michigan.



EPA issues final pollution control regs for smelters

Final air pollution control regulations for new and modified primary copper, lead and zinc smelters were announced recently by EPA. The regulations will reduce the average emissions of smelter particulates (dust and smoke) and sulfur dioxide approximately 95 per cent from previous uncontrolled levels.

The new rules apply to new smelters and to existing smelters modified in a manner that increases their emissions, and limits the discharge of particulate matter from these smelters to 50 milligrams per dry cubic meter at standard conditions.

They require that no gases shall be discharged which contain more than .065 per cent of volume. (Copper, lead and zinc smelters already in existence account for 11 percent of all industrial sulfur dioxide emissions. The rules also demand that no visible smokestack emissions be discharged which exhibit 20 per cent or greater opacity.)

However, the regulations do not cover new and modified reverberatory smelting furnaces at copper smelters, when these smelters are processing copper ores containing a high level of volatile im-

purities--more than 0.2 weight per cent arsenic, 0.1 weight per cent lead. Other processing equipment (roasters and copper converters) at these smelters are not exempted.

Greatest impact of the new rules will be in the copper smelting industry concentration in the southwestern U.S. EPA estimates that implementing the new source standards for copper and zinc smelters will require a \$41 million investment over the next five years and fifth year annualized costs of \$14 million. The Agency, though, feels there will be no significant economic impact on the lead smelting industry.

Price increases resulting from implementation of the standards have been estimated at 1.5 per cent for the copper smelting industry and less than 0.5 per cent for zinc smelting. No price impact is expected on the lead smelting industry.

CO levels in downtown Chicago hit 5-year high

Carbon monoxide levels during 1975 in downtown Chicago reached their highest levels in the past five years. The highest reading violating the nine parts per million national health standard was an eight-hour average of 21 parts per million recorded Nov. 4, 1975.

The entire year's air quality data, collected by a continuous monitor operated by the City of Chicago's Department of Environmental Control, showed violations of the health standard during 21 per cent of the eight-hour periods sampled.

Medical researchers have found that blood samples of people in downtown Chicago contain among the highest levels of carbon monoxide in the nation. The substance interferes with the blood's ability to carry oxygen and adversely affects the nervous and cardiovascular systems.



Monsanto will phase out manufacture of PCB

Responding to a request by EPA Administrator Russell Train, the Monsanto

Company announced in late January that it plans to phase out the manufacture of the toxic groups of chemicals known as PCBs.

F.J. Fitzgerald, a corporate vice president, said he could not give an exact timetable for the phase-out, but "it would be in a planned and orderly manner". Monsanto is the only maker of PCB (polychlorinated biphenyl), used primarily as a nonconductor of direct electrical current. The chemical has been a necessary ingredient in most power-generating equipment.



Plutonium seeps into ground around Maxey Flats, Ky.

Plutonium and other radioactive materials have moved from a surface burial facility at Maxey Flats, Ky., and have seeped into the surrounding environment for distances of up to several hundred feet.

A recent EPA report indicates that plutonium has been found in samples hundreds of feet from its original burial site. The plutonium and other radioactive materials were buried between 1963-72 so the movement has occurred in less than 10 years.

The problem identified in the report reflects the Agency's concern with low-level radioactive waste disposal practices involving shallow land-fill facilities in humid areas of the United States. Among other factors, the report concluded that the radioactivity moved from the site via one or more possible pathways, including surface water runoff, interflow or lateral migration through the soil zone, and migration through fracture systems in the subsurface geologic formations.

The report also noted that there is insufficient radiological and hydrogeological information to estimate in what form, in what quantity or at what rate the plutonium is migrating.

Questions about the report should be directed to the EPA Office of Radiation Programs, 401 M Street S.W., Washington, D.C. 20460.

Environment causes most cancers, say researchers

A growing number of cancer researchers believe that most cancers -- some say as many as 85 per cent -- are triggered by things in the environment. And as a corollary, they think the more successful path to follow may be in managing the environment to prevent cancer, rather than seeking cures for the disease itself.

Dr. Theodore Cooper, assistant secretary of health in the U.S. Department of Health, Education and Welfare, said, "If we become more aggressive with the control of the environment, I think we can go a long way towards solving some of our biggest problems."

The reasons experts are beginning to favor environmental management are strong, but still based mostly on circumstantial evidence. For instance, a recent study by the National Cancer Institute revealed that cancer death rates are much greater in highly-industrialized U.S. counties than in their more bucolic counterparts.

Also, a recent American Cancer Society publication noted that new chemicals were being introduced into industry -- the working environment of millions of people -- at the rate of 700 a year.

The rub, according to one scientist, is that "To test any of the compounds we must apply them to a short-lived animal at high and varying doses." James Miller, University of Wisconsin biochemist, added that "Researchers can't begin to test all chemicals in the environment."

He said that some scientists are screening compounds for further testing by subjecting bacteria to new chemicals. If mutations occur, further tests are warranted to determine the chemical's possible effect on humans.

Actually, the observation that cancer can be caused by environmental factors is hardly new. Some 200 years ago, Percival Pott, a London physician, noted a high incidence of cancer of the scrotum among the city's chimney sweeps.

Said Miller, "Still, there was no move to ban chimney sweeping to protect the sweeps since theirs was an essential occupation; without them, there would have been many more fires in 18th century Europe."

LOCAL REPORT

Recent grants made in Region V

Following is a list of communities, jurisdictions, etc., in Region V which received grants from EPA between Aug. 3, 1975 and Jan. 14, 1976. Most of the grants were for construction of sewage treatment projects of one kind or another and totaled almost \$391 million.

ILLINOIS

Aima, 11/21, \$3,750; Alpha, 8/14, \$6,000; Altamont, 8/29, \$7,050; Amboy, 12/22, \$10,950; Arcola, 8/22, \$60,075; Aurora, 8/22, \$184,100; Barry, 8/22, \$3,150; Bartleso, 9/24, \$11,100; Beecher City, 12/31, \$13,125; Bensenville, 9/18, \$1,151,175; Bethalto, 11/13, \$48,034; Bethany, 12/31, \$8,625; Bloom Township Sanitary District, 12/9, \$4,344,075; Bone Gap, 12/17, \$3,675; Breese, 12/16, \$2,625; Bridgeport, 10/3, \$3,975; Brimfield, 8/26, \$5,625; Bryant, 11/28, \$4,050; Bureau Junction, 12/11, \$9,000; Cambridge, 12/31, \$43,350; Carbondale, 8/29, \$1,214,250; Carmi, 8/29, \$7,575; Carol Stream, 8/19, \$153,000; Casey, 9/11, \$9,000; Centralia, 11/20, \$2,063,325; Chicago, 12/19, \$22,000; Christopher, 10/31, \$17,925; Cissna Park, 12/9, \$7,425; Colp, 8/27, \$29,100; Columbia, 12/31, \$9,750; Creal Springs, 9/11, \$2,175; Cuba, 1/8, \$50,175; Damiansville Water District, 12/15, \$3,000; Danville Sanitary District, 1/12, \$2,172,900; DeLand, 12/16, \$11,550; Dixon State School, 8/19, \$148,300; Du Page County Dept. of Public Works, 9/19, \$148,125; Dupe, 8/19, \$16,000; East Alton, 9/25, \$6,975; East Peoria, 12/8, \$267,600; Elgin Sanitary District, 9/10, \$159,400; Energy, 8/29, \$7,500; Galesburg Sanitary District, 8/11, \$899,600; Gardner, 12/3, \$13,650; Gilman, 10/22, \$58,875; Glen Ellyn, 10/22, \$485,700; Godfrey Township, 12/31, \$2,566,050; Goodfield, 1/12, \$2,250; Gorham Sanitary District, 10/31, \$13,900; Greenup, 10/3, \$2925; Greenville, 8/19, \$28,200; Griggsville, 12/31, \$15,000; Herrin, 9/12, \$20,175; Hinsdale Sanitary District, 10/9, \$642,150; Humbolt, 10/31, \$3,975; Hurst, 8/15, \$4,350; Ill. EPA, 10/30, \$1,340,000; Ill. Dept. of Law Enforcement, 8/19, \$6,700; Irving, 8/28, \$2,250; Irvington Sanitary District, 12/15, \$6,375; Jerseyville, 9/12, \$20,475; Johnston City, 12/22, \$6,975; Kaneland Community School District, 8/19, \$10,100; Lake County, 8/19, \$174,200; Lake County Dept. of Public Works, 8/14, \$18,936,975; Lake of Egypt Water District, 10/2, \$7,200; Lebanon, 11/21, \$8,625; Lombard, 9/25, \$29,800; Lostant, 12/19, \$8,250; Lou-Del Sanitary District, 9/25, \$3,300; Macomb, 11/18, \$11,392; Maple Park, 10/7, \$8,075; Marissa, 9/10, \$22,125; Marshall, 9/29, \$39,375; Martinsville, 10/3, \$3,150; Mendota, 8/19, \$63,200; Metropolis, 12/30, \$37,650; Mokena, 10/22, \$33,500; Moline, 9/29, \$4,370,625; Mounds, 8/29, \$21,000; Mount Carroll, 12/12, \$11,850; Metropolitan Sanitary District of Chicago, 8/29, \$24,518,224; Mt. Carmel, 10/7, \$89,025; Mt. Pulaski, 12/31, \$10,800; Naperville, 8/27, \$292,675; Noble, 12/8, \$7,050; Norris City Sanitary District, 10/9, \$7,875; Oblong, 10/3, \$3,600; Palestine, 10/2, \$3,450; Pana, 10/22, \$40,350; Paris, 8/27, \$21,600; Paw Paw, 12/31, \$4,200; Petersburg, 9/24, \$12,525; Plano, 10/31, \$16,350; Polo, 12/22, \$6,975; Pontiac, 8/11, \$337,450; Red Bud, 8/22, \$171; Rockford Sanitary District, 8/29, \$25,655,550; Salt Creek Sanitary District, 8/29, \$714,450; Silvia Creek, 10/6, \$96,300; South Wilmington/East Brooklyn Sanitary District, 9/12, \$6,600; Sparta, 9/25, \$19,600; Spring Valley, 10/7, \$36,300; St. Clair County, 11/10, \$451,800; St. Jacob, 9/24, \$3,000; Stillman Valley, 8/29, \$43,575; Streamwood, 9/12, \$168,750; Sullivan, 11/13, \$14,025; Swansea, 9/16, \$18,750; Sycamore, 11/19, \$176,400; Tampico, 12/18, \$24,000; Taylorville Sanitary District, 8/14, \$332,250; Tower Hill, 10/23, \$4,125; Troy Grove, 12/24, \$8,700; Urbana-Champaign Sanitary District, 10/23, \$151,200; Washington, 8/20, \$139,043; West Chicago, 12/31, \$62,700; West Dundee, 12/5, \$60,300; Westville/Belgium Sanitary District, 12/31, \$28,500; Wheaton Sanitary District, 9/30, \$4,355,100; Windsor, 9/19, \$1,900; Winfield Village, 9/25, \$24,500. Illinois total: \$101,334,464.

INDIANA

Alexandria, 11/20, \$16,860; Allen County Soil & Water Conservation District, 11/26, \$285,697; Anderson Air Pollution Control Board, 10/30, \$19,641; Bedford, 8/29, \$3,489,600; Bloomington, 9/18, \$90,450; Boswell, 10/7, \$210,900; Brookville, 12/31, \$684,590; Chalmers, 8/13, \$39,025; Chianey, 10/14, \$2,281; Crawfordville, 9/12, \$182,780; Fall Creek Regional Waste District, 12/31, \$77,895; Gary Sanitary District, 9/26, \$300,000; Greenwood, 11/19, \$84,875; Hammond Sanitary District, 12/10, \$111,750; Hartford City, 9/11, \$85,500; Independence Hill Conservancy, 11/25, \$28,575; Indiana Air Pollution Control, 9/10, \$898,054; Indiana Port Commission, 8/19, \$124,500; Indiana State Board of Health, 9/23, \$108,100; Indiana Stream Pollution Control Board, 9/19, \$1,678,200; Indianapolis, 8/21, \$218,860; Knightsville, 9/30, \$874,875; Knox, 1/12, \$26,837; Laurel, 8/29, \$896,700; Linden, 12/8, \$249,375; Linton, 8/15, \$100,425; Milan, 9/11, \$12,375; Monon, 8/19, \$15,820; Montgomery, 11/6, \$11,920; Muncie City, 12/12, \$627,150; New Providence, 12/17, \$3,975; Paragon, 10/23, \$78,050; Parker City, 10/28, \$10,275; Pennville, 8/19, \$21,225; Poseyville, 8/21, \$298,050; Princeton, 8/29, \$432,750; Richmond, 9/16, \$109,575; Richmond Regional Sanitary District, 10/30, \$587,475; Richmond Sanitary District, 12/31, \$198,525; Rockport, 9/30, \$1,492; Schererville, 11/20, \$495,075; Scottsburg, 8/18, \$15,750; Seymour, 12/3, \$375,975; Shipshewana, 12/15, \$1,925; South Dearborn Regional Sanitary District, 11/18, \$160,425; Trafalgar, 8/19, \$5,625; Upland, 9/12, \$33,000; Waterloo, 9/30, \$167,100; West Terre Haute, 8/21, \$3,000; Windfall City, 12/31, \$53,925; Woodburn, 8/29, \$294,000. Indiana total: \$15,265,797.

MICHIGAN

Bay City, 11/24, \$4,252,500; Big Rapids, 12/31, \$2,673,300; Cheboygan, 12/31, \$5,879,175; Chesaning, 8/29, \$942,500; Clarksville, 1/13, \$36,225; Covert, 12/31, \$29,775; Delhi Charter, 10/31, \$7,500; Dowagiac, 8/29, \$3,045,000; Dundee, 12/15, \$19,050; Eaton Rapids, 8/22, \$45,021; North Bank of Ecorse Creek, 9/24, \$56,250; Elk Rapids, 12/8, \$2,188,650; Frankenmuth, 10/31, \$8,847.

Grand Rapids, 10/10, \$4,373,553; Gratiot County Dept. of Public Works, 12/31, \$805,800; Hancock, 10/31, \$1,658,479; Homer, 12/10, \$7,651; Houghton County Bureau of Public Works, 9/19, \$5,085,900; Howell, 12/22, \$8,400; Ionia, 10/31, \$4,687,500; Iron Mountain-Kingsford, 9/30, \$2,994,900; Kalkaska, 12/31, \$28,650; Kent County Dept. of Public Works, 10/15, \$100,849; L'Anse, 12/22, \$29,550; Lapeer County Drainage Commission, 12/31, \$69,225; Luce County Dept. of Public Works, 10/31, \$2,020,950; Ludington, 9/22, \$85,200; Mackinaw City, 8/20, \$43.

Manistique, 12/5, \$2,004,900; Mason, 9/24, \$20,920; Menominee, 12/31, \$18,771; Michigan Dept. of Natural Resources, 12/3, \$2,000; State of Michigan, 8/11, \$2,058,494; Michigan State University, 8/28, \$276,000; Monroe County (Frenchtown), 11/7, \$629,775; Monroe County, 10/23, \$2,146,100; Mt. Clemens, 9/30, \$4,892,550; Oakland County Bureau of Public Works, 1/8, \$22,725; Owosso-Caledonia Township, 11/25, \$272,250; Plainwell, 12/19, \$36,000; Port Austin, 12/9, \$18,375; Romeo, 12/31, \$42,150; Roscommon County Dept. of Public Works, 12/31, \$28,500.

Sandusky, 12/31, \$4,500; South Macomb Sanitary District, 11/21, \$98,625; Sunfield, 12/12, \$21,300; Tuscola County Dept. of Public Works, 12/31, \$5,175; Washington Township, 9/30, \$7,715,550; Washtenaw County Dept. of Public Works, 12/9, \$2,352,150; Watervliet, 1/13, \$31,125; Wayne County Board of Road Commissioners, 12/31, \$133,875; Wayne County, 12/31, \$948,795. Michigan total: \$65,401,048.

MINNESOTA

Albany, 10/7, \$4,200; Arlington, 12/31, \$15,750; Butterfield, 11/21, \$1,052; Clearwater-Clear Lake, 12/22, \$35,775; Cologne, 11/28, \$18,000; Cosmos, 10/17, \$5,053; Dover-Eyota-St. Charles Sanitary District, 11/19, \$3,053,550; Edgerton, 9/23, \$1,150; Fergus Falls, 8/18, \$24,750; Grand Rapids, 10/31, \$482,704; Grasston, 8/25, \$9,927; Lewiston, 8/15, \$2,768; Little Falls, 11/6, \$5,625; Lonsdale, 10/2, \$15,080; Madelia, 12/10, \$3,128; Metro Waste Control Commission, 12/4, \$36,709; Minnesota Pollution Control Administration, 10/20, \$40,000.

University of Minnesota, 8/25, \$9,070; Montgomery, 11/25, \$16,000; Moorhead, 8/29, \$3,088; Nelson, 10/10, \$6,900; Olivia, 1/12, \$28,500; Palisade, 9/19, \$4,125; Rollingsstone, 11/24, \$2,227; Shevlin, 9/25, \$3,825; St. Cloud, 11/28, \$17,334; Taunton, 12/8, \$4,575; Twin Cities Metro Waste Control Commission, 11/28, \$1,815,225; Western Lake Superior Sanitary District, 9/11, \$6,922,950; Young America, 8/27, \$5,701. Minnesota total: \$12,596,831.

OHIO

Ashley, 12/31, \$1,242,975; Atwood Regional Water & Sewer District, 9/18, \$211,125; Beach City, 10/17, \$1,007; Beaverdam, 10/31, \$747,150; Bloomington, 12/5, \$754,725; Bowling Green, 9/11, \$462,378; Bryan, 12/31, \$93,750; Burton, 9/30, \$786,300; Butler County Board of Commissioners, 11/18, \$617,325; Caledonia, 12/22, \$11,500; Clark County Board of Commissioners, 11/10, \$270,750; Clayton, 12/12, \$23,775; Clermont County Board of Commissioners (Lower East), 8/19, \$355,650; Cleveland Regional Sanitary District, 12/19, \$14,096,600.

Columbiana County Board of Commissioners, 10/31, \$2,055,675; Columbus, 11/28, \$12,154,050; Covington, 8/29, \$122,475; Cuyahoga Falls, 12/12, \$935,400; Defiance, 11/13, \$13,500; Dillonvale, 10/15, \$21,375; Dublin, 10/6, \$249,375; East Liverpool, 10/14, \$228,300; Fort Jennings, 12/12, \$4,125; Geauga County Board of Commissioners, 8/29, \$7,606,050; Grove City, 12/31, \$24,075; Hamilton, 12/15, \$2,272,875.

Harrod, 10/15, \$6,750; Jackson, 12/31, \$334,875; Laurelville, 11/11, \$7,125; Lebanon, \$130,900; \$98,175; London, 1/6, \$50,250; Lorain, 8/21, \$203,850; Lucas County Board of Commissioners, 11/14, \$8,374,950; Lucas County, 12/8, \$225,150; Malvern, 10/3, \$139,575; Massillon, 10/3, \$67,425; Medina, 8/29, \$2,517,600; Miamisburg, 12/31, \$1,097,550.

Minister, 10/31, \$53,400; Montgomery County, 8/29, \$22,534,500; Mount Vernon, 10/31, \$312,875; New Bloomington, 12/31, \$7,425; New Concord, 9/30, \$34,125; New Knoxville, 11/7, \$1,053,600; New Madison, 12/29, \$23,850; Newcomerstown, 11/18, \$138,975; Ohio River Valley Sanitation Commission, 8/21, \$268,200; Ohio State University, 8/28, \$108,000; Ontario, 12/31, \$23,175; Oregon, 11/11, \$3,784,500; Ottoville, 8/18, \$1,029,525; Oxford, 8/18, \$255,000; Perrysburg, 11/7, \$19,500.

Pioneer, 12/31, \$78,900; Pleasant Hill, 11/19, \$78,600; Portage County Board of Commissioners, 11/20, \$58,800; Preble County, 10/9, \$22,425; Rawson, 12/31, \$17,775; Sandusky, 11/28, \$127,275; Seven Hills, 9/18, \$113,100; Sherwood Village, 12/31, \$921,975; South Point, 11/7, \$3,868,575; Stark County Board of Commissioners, 10/2, \$7,500; Stark County, 10/16, \$2,625; Steubenville, 12/31, \$4,300,200; Summit County, 10/31, \$19,891,125; Summit County Board of Commissioners, \$25,619,100; Sycamore, 9/25, \$50,093.

Sylvania, 10/29, \$776,625; Tuscarawas County Board of Commissioners, 11/20, \$63,375; Tuscarawas County, 12/31, \$202,125; Tuscarawas, 11/28, \$327,750; Urbana, 12/31, \$131,625; Vanlue, 9/26, \$615,750; Washington, 9/30, \$657,375; Westerville, 9/30, \$3,645,075; Willard, 12/19, \$42,300; Wood County, 11/7, \$2,889,375; Xenia, 11/5, \$693,525; Youngstown, 8/29, \$1,154,325. Ohio total: \$154,714,515.

WISCONSIN

Appleton, 11/26, \$17,842,500; Ashland, 10/17, \$70,547; Balsam Lake, 11/25, \$34,200; Bayfield, 11/12, \$3,867; Beaver Dam, 11/10, \$14,649; Benton, 8/26, \$9,000; Biron Village, 11/14, \$14,925; Brillion, 10/17, \$39,375; Brooklyn, 10/30, \$15,825; Browns Lake Sanitary District, 8/18, \$1,700; Butte Des Morts Utilization District, 11/13, \$75,000; Caddy Vista Sanitary District, 9/29, \$12,825; Cashton, 8/29, \$9,825; Cochrane, 9/18, \$8,775; Cornell, 11/26, \$19,200; Deerfield, 9/25, \$20,850; Denmark, 8/25, \$27,075; Depere, 8/29, \$17,422,350.

Desoto, 12/8, \$7,875; Durand, 12/9, \$25,125; Eagle River, 11/5, \$5,508; Embarrass, 8/22, \$12,375; Fond du Lac, 8/29, \$29,775; Fountain City, 8/25, \$8,775; Gresham, 8/27, \$15,000; Hartford, 10/8, \$76,488; Holland Sanitary District, 10/7, \$492,375; Independence, 9/11, \$8,925; Juneau, 10/20, \$2,925; LaFarge, 10/30, \$12,750; Lakeland Sanitary District, 12/22, \$22,650; Lomira, 12/29, \$29,700; Luxemburg, 8/8, \$53,700; Madison Metro Sewage District, 12/31, \$117,600; Manitowoc, 8/29, \$162,600.

Marion, 10/31, \$40,050; Milwaukee County Metro Sanitary District, 12/15, \$108,825; Neenah-Menasha Sewerage Commission, 9/16, \$102,000; Oconto Falls, 9/30, \$19,050; Ontario, 9/25, \$15,000; Portage, 10/17, \$38,925; Princeton, 8/8, \$49,575; Racine, 11/21, \$213,225; Rhinelander, 8/29, \$1,694,025; Rib Lake, 11/28, \$35,475; Sauk Prairie Sewage Commission, 10/22, \$35,025; Sevastopol Sanitary District no. 1, 8/20, \$29,269; Seymour, 12/10, \$23,775; Shiocton, 10/31, \$15,450; Somerset, 12/15, \$23,925; Sturtevant, 12/31, \$38,925.

Sussex, 10/31, \$101,287; Theresa, 12/31, \$39,000; Thorp, 8/14, \$11,600; Turtle Lake, 10/24, \$16,500; Two Rivers, 8/11, \$115,950; Union Grove, 8/27, \$88,700; Viola, 10/17, \$14,625; Westby, 9/18, \$8,775; Wilton, 12/31, \$5,925; Wisconsin Dept. of Natural Resources, 8/22, \$1,755,316; Wisconsin Rapids, 11/14, \$32,325; State of Wisconsin, 9/26, \$65,615; University of Wisconsin, 8/29, \$9,915; Wittenberg, 10/30, \$21,075; Wonewoc, 9/18, \$14,175. Wisconsin total: \$41,490,556.

FEDERAL REGISTER

DECEMBER 11, 1975

Notices

Air quality implementation plans; New Jersey; hearings
Pesticide registration: Applications (2 documents)
Pesticide applicator certification; State plans: Oregon

DECEMBER 12, 1975

Notices

Environmental impact statements; agency comments

DECEMBER 16, 1975

Rules

Air pollution, standards of performance for new stationary sources:
Definitions
Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:
2,4-D
Water quality standards, implementing Safe Drinking Water Act:
Interim project review guidelines

Proposed Rules

Air quality implementation plans:
California
Kentucky
Preparation, adoption, and submittal
Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:
Inert ingredients

Notices

Ambient air monitoring reference and equivalent methods
Edwards Underground Reservoir, San Antonio, Texas area; determination
Environmental impact statements and other actions impacting the environment; availability of comments
Pesticide and food additive petitions; filing

DECEMBER 17, 1975

Rules

Grants, procurement for construction of treatment works

DECEMBER 18, 1975

Rules

Air pollutants, hazardous, National emission standards:
Washington, authority delegations
Air pollution control, new motor vehicles and engines:
Catalyst equipped vehicles; labeling and importation of
Energy Supply and Environmental Coordination Act, related authority; compliance date extensions, eligibility
Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:
Fluchloralin
Glyphosate

Proposed Rules

Air quality implementation plans; various States:
South Carolina

Notices

Pesticide tolerance in or on certain raw agricultural commodities and food additive tolerances; petitions:
American Cyanamid Co. (2 documents)
Chevron Chemical Co.

Pesticides, specific exemptions and experimental use permits:
Elanco Products Co.
State of Arizona, DEF for defoliant harvest aid

DECEMBER 19, 1975

Notices

Implementation plans; public hearings

DECEMBER 22, 1975

Rules

Air pollution, standards of performance for new stationary sources:
Emission monitoring, performance testing methods; correction (2 documents)
Air quality implementation plans:
Virgin Islands, revision

Notices

Meetings:
Hazardous Materials Advisory Committee
Pesticides, specific exemptions and experimental use permits:
Mobil Chemical Co.

DECEMBER 23, 1975

Notices

Pesticide applicator certification; State plans:
West Virginia

DECEMBER 24, 1975

Rules

Air quality; implementation plans:
North Dakota
National interim drinking water regulations and special monitoring regulations for organic chemicals (2 documents)
Effluent guidelines and standards:
Ore mining and dressing point source; extension of comment period

Proposed Rules

Air quality:
National emission standards for hazardous pollutants
Effluent guidelines and standards:
Ore mining and dressing point source; extension of comment period

Notices

Air quality standards:
Addition of hazardous air pollutants to list
Food additive tolerance petitions:
Chemagro Agricultural Division
Pesticides, specific exemptions and experimental use permits:
Vermont Department of Agriculture; diphacinone

Meetings:

National Air Quality Criteria Advisory Committee

DECEMBER 30, 1975

Rules

Air pollutants, hazardous, National emissions standards:
Maine; authority delegation
Air pollution, standards of pollution for new stationary sources:
Maine; authority delegation
Air pollution, standards of pollution for new stationary sources:
Maine; authority delegation
Air quality implementation plans:
Ambient air quality standards, National; correction
Pesticide chemicals in or on raw agricultural commodities; tolerances

and exemptions: 3,5-Dimethyl - 4 - (methylthio)

Phenyl methylcarbamate

Proposed Rules

Hazardous substances (4 documents)

Notices

Authority delegations:

Maine, State of

Pesticide applicator certifications: State plans:

New Jersey

Pesticide chemicals, etc.: petitions: American Cyanamid Co.

Pesticide registration:

Applications (2 documents)

Pesticides, specific exemptions and experimental use permits:

American Cyanamid Co. (2 documents)

Pesticides: tolerances

DECEMBER 31, 1975

Proposed Rules

National emission standards for hazardous air pollutants:

Vinyl chloride; public hearing

Notices

Meetings:

Hazardous Materials Advisory Committee: postponement

Water Pollution Control Act Amendments of 1972: second memorandum of understanding and policy statement; cross-reference

JANUARY 5, 1976

Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc:

Carbofuran

3,5 - Dimethyl - 4 - (methylthio) phenyl methylcarbamate; correction
N - (mercaptomethyl) phthalimide S- (O, O-dimethyl Phosphorodithiodate)

Water pollution; effluent guidelines for certain point source categories;

manufacturing, processing, etc.:

Organic chemicals; significant organic products

Proposed Rules

Water pollution; effluent guidelines for certain point source categories, manufacturing and processing, etc.:

Organic chemicals; significant organic products

Notices

Pesticides, specific exemptions and experimental use permits:

New Hampshire Division of Public Health Services; bat eradication

JANUARY 6, 1976

Notices

Meetings:

Environmental Health Advisory Committee

Environmental Radiation Protection for Nuclear Power Operations

Pesticide applicator certification; State plans:

South Carolina

JANUARY 7, 1976

Notices

Air quality implementation plans: Oregon

JANUARY 9, 1976

Proposed Rules

Air quality implementation plans:

New Jersey, Mass Transit Priority Incentive Programs

Notices

Committee renewal: Science Advisory Board

Pesticide registration, cancellation:

Cowley's Original Rat and Mouse Poison

Pesticides, specific exemptions and experimental use permits:

Montana Department of Livestock; strychnine to control rabid skunks

New Mexico Department of Agriculture; control of fleas harboring plague organisms

Oklahoma State Department of Agriculture; sodium chlorate for desiccation of mung beans

JANUARY 12, 1976

Proposed Rules

Effluent standards for toxic pollutants; public hearings on

*U.S. Government Printing Office: 1976 - 650-516 P.O.: NO. 5/Regional V-1

**ENVIRONMENT MIDWEST
ENVIRONMENTAL PROTECTION AGENCY**

Office of Public Affairs
230 South Dearborn
Chicago, Illinois 60604

THIRD CLASS

POSTAGE AND FEES PAID
ENVIRONMENTAL PROTECTION AGENCY

EPA-335



Return this sheet if you do NOT wish to receive this material, or if a change of address is needed. (Indicate change, including zip code.)



Environment Midwest

REGION V
UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY

MARCH 1976

APR 7 1976

ENVIRONMENTAL PROTECTION AGENCY
LIBRARY, REGION V

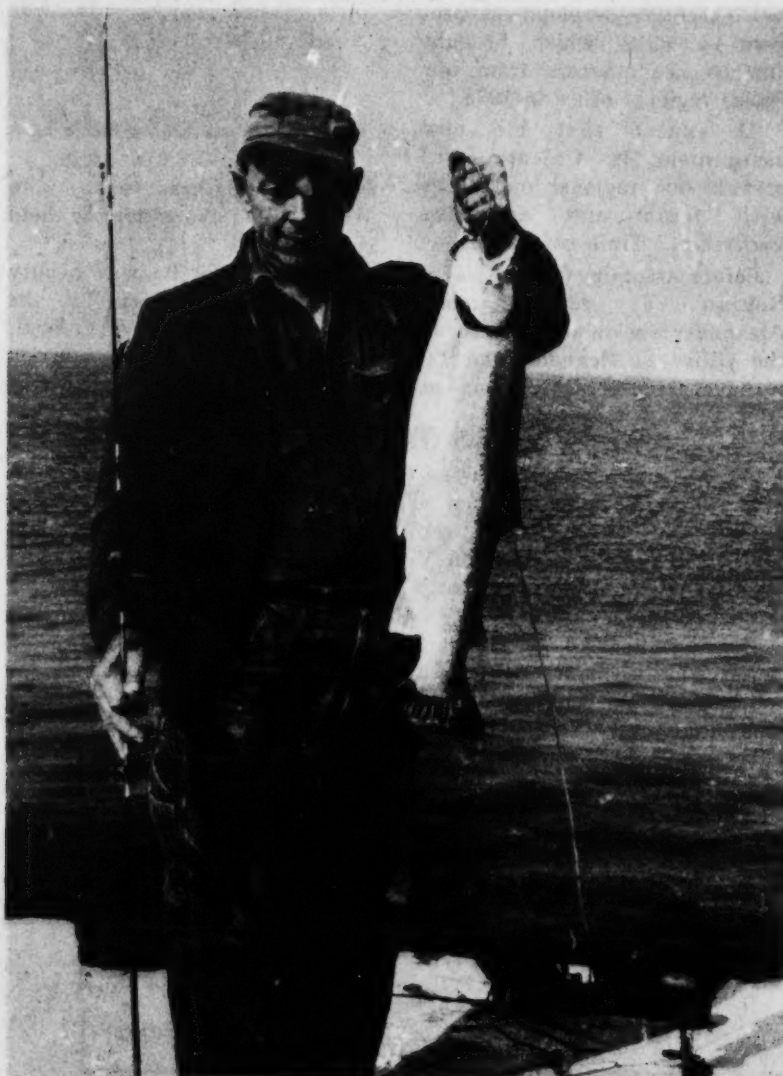
**Sports fishermen and
the PCB problem**

Page 3



**Noise abatement
in small towns**
Page 6

**Certification of
private applicators**
Page 8



Alexander new Region V administrator

George R. Alexander Jr. is the new EPA Region V administrator, replacing Francis T. Mayo, who had held the position since 1970. The change took place March 8.

In announcing the change, EPA Administrator Russell E. Train said, "These new assignments are designed to strengthen the administration and management of the Agency. George Alexander received the first mobility assignment under our new executive development program—a move which brought him to headquarters from our Dallas regional office in 1974.

"I expect that his new assignment in Chicago will provide our regional operations with fresh and aggressive leadership," Train continued.

Before assuming his duties as Region V administrator, Alexander was deputy director of the Office of Regional and Intergovernmental Operations at



GEORGE R. ALEXANDER JR.
EPA headquarters in Washington, a position he held since 1974.

From 1972-74 he was deputy regional administrator for the Agency's Region VI, headquartered in Dallas. And in 1974 he received the Bronze Medal

for exceptional service to EPA.

Prior to joining the Agency in 1972, Alexander was executive vice president of Continental Life Insurance Company, vice president and general council of the Rio Grande National Life Insurance Company, and conducted a private law practice.

He also holds BBA and JD degrees from Southern Methodist University in Dallas and is a member of the Texas and Kentucky Bar Associations.

In making the Alexander announcement, Administrator Train also said that Mayo has been reassigned as director of the Municipal Environmental Research Laboratory in Cincinnati.

Train said that, "Francis Mayo's new job allows us to apply his outstanding experience in regional management to the objectives of our research program.

"Francis has attained a distinguished record as the administrator of one of our most active and difficult regions," Train continued. "He is dedicated to the environmental objectives of the Agency and should provide invaluable guidance to our research program."

Mayo held a variety of senior positions with the Federal Water Quality Administration from 1966-71 in the Department of the Interior, and was named Region V director in 1970.

From 1952-66, Mayo worked for the State of Utah in the state engineer's office, the last eight years as chief of the water research division.

He holds a BS degree in civil engineering with honors from the University of Utah and is a registered professional engineer.

Racki takes over as EM editor

Commencing with this issue, "Environment Midwest" has a new editor. He is Matt Racki, who joined the staff of the Region V Public Affairs Office in early January.

Before coming to the Agency, he served as managing editor of a monthly trade publication in Chicago and from 1964-72 per-

formed a variety of public information activities in the U.S. Air Force.

A Texas native, Racki earned a BS degree in journalism in 1963 from Loyola University in New Orleans and has worked on several daily and weekly newspapers. He and his wife, Joan, reside in Chicago.

Environment Midwest is a monthly newsletter published by the Public Affairs Office, Region V EPA, 230 S. Dearborn, Chicago, Ill. 60604.
George R. Alexander, Jr. Administrator

Valdas Adamkus Deputy Administrator

Frank Corrado Public Affairs Director

Matt Racki Editor

PCB's and the sports fisherman

To a golfer, it would be something akin to learning the grass at his favorite course has been permanently contaminated with DDT. To a bowler, it might be tantamount to discovering a certain chemical used in the manufacture of bowling balls for the past 60 years can cause cancer. And for the sports fisherman, it's knowing that his catch from Lake Michigan (or any of the Great Lakes for that matter) stands an excellent chance of being loaded with PCBs.

The big question plaguing such fishermen these days is what, if

anything, can they do about it. Should they throw back everything they catch? In short, should the sports fisherman and the industries he supports be accorded a place on the endangered species list?

To hear one group of sports fishermen tell it, not necessarily. That was the prevailing attitude at a recent meeting of the Great Lakes Sports Fishing Council in suburban Chicago. Comprised of 13 member fishing clubs, the council represents about 12,000 fishing families, according to its president, Eldon Robbins.

Many of those present didn't

think a proposed lowering of the PCB temporary tolerance level in fish from five to 2.5 parts per million as set by the Food and Drug Administration would affect their outlook on their favorite recreation. Said Clarence Shedrow, vice president of Sportsmen of Northern Indiana, "I'd rather wait until we get some more definitive data on just how much harm PCBs can do to the human system."

"Right now, we aren't sure how much is too much. Sure, we know what exposure to PCBs in certain laboratory animals can do, but the question is, how much can we



Sights like this may be a thing of the past some day if PCBs prove harmful to many fish species.

extrapolate that information to humans?"

Numerous experts agree. One of the speakers at the fisherman's meeting, Donald Heaton of the Food and Drug Administration, told the sportsmen that, "Although we know of some of the effects of PCBs...loss of hair, formation of sores in the facial area...we really don't have any idea of how long a person could keep ingesting PCBs before becoming ill. It depends on so many things — over how long a period the chemical is ingested, the size and weight of the person, the potency of a particular dose, etcetera."

His remarks were echoed by James E. Elder, senior staff biologist of the U.S. Fish and Wildlife Service. He noted that, "Another thing to remember is that we also must find out how PCBs affect a specific fish species. For all we know, you fishermen could be out of luck if it turns out PCBs are capable of eliminating an entire species."

He added that PCB accumulation in fish leads to a lower reproductive rate and, perhaps even more importantly, can cause drastic changes in the fish's behavioral patterns.

"What I mean is that a fish may 'forget' how to avoid its enemies, how to find food or how to select a good spawning area. It literally becomes so disoriented it no longer has the proper instincts necessary for survival."

Elder went on to quote an eye-opening statistic — since 1929, when PCB manufacture began, only one per cent of the compound has entered the environment. His question to the fishermen was, "If only one per cent have caused all the problems we're starting to see, what's the environment going to be like if 10 or 20 or even 40 per cent of the PCBs eventually escape into it?"

The enormity of the PCB problem was brought home to the fishermen's group by Karl Bremer

of the surveillance and analysis division of Region V. He enumerated a host of items containing PCBs — "open systems" such as paints, varnishes, inks, paper coatings, carbonless "carbon paper" and hydraulic fluid and in "closed" electrical systems such as transformers and capacitors. And the problem isn't limited to the United States, Bremer added. He said that PCBs are presently being manufactured in Germany, England, Russia, France, Italy and Czechoslovakia.

Bremer also advised the group that, "Unfortunately, PCBs can get into the environment in numerous ways. One is by the recycling of old hydraulic oil; it has been demonstrated that PCB-contaminated oil may be added to other oils and redistributed. Another way is by burning cardboard boxes or carbonless carbon paper. Since PCBs are in the material to begin with, they escape into the air as the material is burned."

He added that there are three EPA goals in dealing with PCBs, goals voiced by Administrator Russell Train following the November 1975 national conference on PCBs. Specifically, said Bremer, EPA must commit itself to phasing out the manufacture and importation of PCBs from Europe; the Agency must make sure PCBs in electrical transformers and capacitors aren't released into the environment (the electrical industry is far and away the biggest PCB user); and finally, PCBs must be eliminated from the process wastes of manufacturers and others who use PCBs.

"We must channel our efforts into passage of the Toxic Substances Control Act. That legislation is the key," Bremer said, adding that chances are good it may be ready for the President's signature sometime this summer.

What the act would do is give

EPA the authority to prove or disprove the safety of new chemical compounds before they are marketed. At present the Agency can only regulate industrial discharges of toxic chemicals like PCBs.

But EPA is hardly standing still on the PCB issue. Administrator Russell Train has called for a national program of prevention, including new legislation (the TSCA) that would control toxic substances, including PCBs. And on Dec. 22, 1975 he announced a PCB action plan:

- EPA regional offices were directed to establish discharge permit requirements that would eliminate PCBs from all industrial process wastes;

- Manufacturers were asked to develop alternatives to PCBs as soon as possible;

- Presidents of electric companies and other large users of PCBs were asked to control their usage and disposal;

- Regulations to control spills of PCBs and other hazardous substances were proposed;

- Governors were asked to look at how they might be able to deal with the problem and federal agencies were asked to immediately inventory their uses of PCBs and to develop plans for adequate management and safe disposal.

But Train also noted that, "The public should be under no illusions as to the difficulty of dealing with this problem," adding that the problem could hardly be eliminated overnight with more than 400 million pounds of PCBs in landfills, soils, and bottom sediments of rivers, lakes and estuaries.

Another problem EPA faces, and this was brought home to the sport fishermen, is that the Agency cannot get complete information as to what kind of new chemical substances are getting into the environment. Additionally, EPA can't prevent

problems by looking at new chemicals before they enter the market place (a situation the TSCA would remedy), federal agencies approaches to control are not coordinated, and chemicals can't be restricted or pulled off the market even if they are found to be toxic.

Still, there's hardly any rejoicing over that state of affairs among the sports fishermen of the Great Lakes. They pretty much take a common sense approach the whole question of PCB content in the fish they catch and take home for the dinner table.

As Robbins said, "We're all aware of the recommendations that we consume no more than one meal a week of fish from the Great Lakes. And we all are also aware that how you prepare the fish could have some bearing on the amount of PCBs that might get into your body. That is, the fatty area should be trimmed away, and the fish should be cooked thoroughly, preferably by broiling. This gets rid of most of the fat, where PCBs tend to concentrate."

Not one to tempt fate, Robbins went on to say that he doubted very much if he would consume, say, two meals of lake fish a week when one meal was the recommended maximum.

"I'd even go so far as to say I'm hesitant about eating some of the larger fish," Robbins added. "It's fun to catch the larger ones, but I have little or no interest in consuming fish that are trophy size. God only knows what the PCB levels in them is liable to be."

Several other fishermen in attendance brought up another point — they weren't as concerned with PCBs affecting them personally as they were with what impact the FDA proposal might have on dozens of communities along the shores of the Great Lakes that depend upon sports fishing almost for their very existence.

Said Jim Lincoln, president of

Sportsmen of Northern Indiana, "We're talking of a \$200 million dollar a year business when you consider the states contingent upon the Great Lakes and also the firms that manufacture fishing equipment such as boats and tackle."

Another fisherman said that, "I followed a load of boats on the highway for awhile that was coming up to Chicago all the way from Florida, for a sports show. And you know those people wouldn't be hauling them all the way from Florida to Chicago unless they expect to sell them."

"I'm concerned with anything that's going to affect my health, my pleasures, my recreation as it were. And PCBs seem to be something that could affect all

"It's fun to catch the larger ones, but I have little or no interest in eating trophy-size fish. God only knows what their PCB levels might be."

those. I'm an avid fisherman. I spend about 300 hours a year on the lakes and I look upon it as my release of tensions and so I'm naturally concerned."

Still another angler was solidly behind passage of the TSCA. "I think we should enable EPA to stop this spread of PCBs; without it their hands are completely tied. What's the use of having people to do this job if they can't enforce anything? EPA has to have the tools to do the job we expect them to do."

A few fishermen felt that reducing the allowable level of PCBs from five to 2.5 parts per million would make very little difference in the frequency with which they had fish for dinner.

Lincoln, for example, said that, "As we heard Heulton say, that figure of five parts per million is strictly arbitrary. That told me quite a lot. It meant that he doesn't know for sure what is harmful and, as someone mentioned earlier, no one does."

"I think it comes down to a necessity for each sports fisherman to exercise a little prudence in how much he eats fish taken from Lake Michigan or the other lakes. Let's get a little more information before we go into some kind of a panic over the amount of PCBs we ingest," Lincoln said.

Still, there was no real opposition to the passage of the TSCA. One fisherman said that, "I think all the member clubs of the Council are interested in backing the act. However, I don't believe any of us have a copy of the bill; we just have sketchy information and were we to know more about it, I think we could give a definitive yes or no. For now, I think the Council's basic position would have to be termed 'yes, with reservations' insofar as the TSCA is concerned."

All in all, then, there is at least one group of fishermen who take a pragmatic approach to PCBs — eating no more than one meal a week from the Great Lakes and being sure they prepare their catch to maximize the elimination of the toxic substance from their dinner. They don't view five parts per million or 2½ parts per million as making that much difference to their personal well being, but are concerned about the possible long-range economic effects of the TSCA.

As one aging angler put it, "If a lot of the sports fishing industries go under, we may reach the point where we'll have to find a grassy spot on some stream bank and do our fishing with a tree branch. Of course, if things ever get that bad, I doubt if we'd want to eat anything we caught anyway."

Mum's the word—hopefully

Looking for some peace and quiet? Something along the lines of a small (25,000 population or so) Midwestern community where things are a little less noisy? Sadly to say, there aren't that many available, at least not with noise ordinances on the books to keep blaring auto horns, throbbing air conditioners, raucous construction equipment and other noise nuisances at bay.

While it's true there is nothing firm that says a town *must* adopt such an ordinance, it would be unrealistic to think that public pressure won't eventually force most communities to do so.

Even now, nation-wide, 539 municipalities had adopted noise ordinances by the end of 1974. They range in size from Los Angeles to Bay Lake, Fla. (population 18) and affect a combined population of more than 65 million people. And if the 539 figure doesn't seem too impressive against the total number of municipalities in the U.S., it still represents a tripling of the number of communities that had noise ordinances on their books a scant three years earlier.

There would probably be a lot more, if, historically, governments had had more guidance. What has existed usually has been general and narrowly-based. But recently, the Federal government, several states, and professional organizations have taken up the slack.

EPA, for example, published "Model Community Noise Control Ordinance" in September 1975. Florida, Oregon and California are completing noise guidelines for assisting their local jurisdictions. And the National Environmental Health Association has also proposed models.

But writing models isn't the simplest task in the world, let

alone writing ordinances themselves, according to Clifford R. Bragdon of the Georgia Institute of Technology. In an editorial in the December 1975 issue of "Sound And Vibration," he says, "Such efforts (model writing) are needed and should be encouraged, but before these so-called models are ingested by communities, words of caution should be voiced."

Bragdon goes on to say that use of the word "model" is unfortunate in describing these documents, noting that the word connotes a universal fit or solution

editorial told readers that, "A true noise model will not exist until it can be universally applied, encompasses all aspects of a noise control program, and accurately assesses behavior patterns—including that of politicians, the custodians of legislatively-mandated programs."

Region V EPA officials stress that they have plenty of assistance to offer communities seeking help in writing noise abatement models. Says Horst E. Witschonke of the air and hazardous materials control branch, "That's what we're here



Sound level meters like these are available from the Region V air and hazardous materials control branch.

for any or all communities. He says that, "More accurately, these documents are at best guidelines for the promulgation of legislation."

One of the biggest drawbacks to much of the models now in existence, thinks Bragdon, is that "carte blanche" solutions may not be applicable. He cites the case of a south Florida city that copied the Chicago noise ordinance to the letter, including snowmobile provisions.

In summation, Bragdon's

for, to help in any way we can. Of course, we can't do much until a community contacts us, but then we'll go all out to assist them."

For one thing, Witschonke will send the community a copy of the EPA model ordinance. The 48-page publication, among other things, defines the powers and duties of the environmental protection/noise control officer, as well as those of other officers; recommends certain acts pertaining to noise be prohibited; lists exceptions and variances;

and recommends maximum sound levels for motor vehicles.

Two other EPA documents are also sent to communities seeking assistance—"Public Health and Welfare Criteria For Noise," and "Information On Levels Of Environmental Noise Requisite To Protect Public Health And Welfare With An Adequate Margin of Safety." Like their titles, the works are a bit formidable, especially to those without a scientific background. But Witschonke, a noise control specialist, says not to worry—one of his duties is to answer any questions about the volumes that proposers of model noise ordinances may have.

Another service he and his co-workers provide is the free loan of sound level meters to communities that want to find out just how noisy their environment might really be.

Witschonke, who has been with the Agency only about six months, feels that personal contact is the best way to interest more communities in writing noise control ordinances. Although his initial contact is usually by letter or telephone, he plans to make as many public speaking engagements across the region as possible.

"I want to start visiting some of the cities and towns around the region and let them know what we can do for them," he said.

Another project Witschonke hopes will go a long way towards that end is an environmental noise workshop scheduled May 4-5 in Chicago, modeled after similar gatherings held around the nation.

The program is still in the formative stage, but will probably include most of the items discussed elsewhere.

Those items included:

- fundamentals of acoustics;
- sources of environmental noise;
- effects of noise on people;
- the Noise Control Act of 1972;
- the legal basis of noise



Simplicity is the key to composing noise abatement ordinances.

control;

- a review of existing state/local regulations;
- land use planning;
- instrumentation;
- elements of a noise control program.

"We don't know yet what kind of turnout we can expect," Witschonke said, "but I'm sure the workshop will contain something of interest for everybody."

Although cities and towns across Region V haven't stamped towards adoption of noise ordinances, one that has had a

law on the books for several years is Urbana, Ill. Located about 130 miles south of Chicago, it is a college community of approximately 32,000 people with the typical "neat, well-kept front yards and tree-lined streets."

The ordinance, passed in January 1972, was the result of months of work by a local citizens group, in cooperation with students from the University of Illinois, the biggest Urbana "industry." It was drafted by an Illinois University professor. And when an Urbana alderman took up the cause, it was passed almost

unanimously by the city council.

According to Larry E. Reed, administrator of Urbana's department of community development services (which oversees the enforcement of the ordinance), the city is a generally quieter place to live. Of course, folks had some misgivings.

"There was a little resistance on the part of local power equipment dealers," Reed noted, "but they eventually came around. The law is written so that noise limits get more restrictive year by year, meaning people can adjust to the law gradually."

He feels the ordinance has worked well with the manpower his office has to enforce it, and mentioned "helpful hints" for other reasonably small towns thinking about passing ordinances of their own.

At or near the top of the hints list, says Reed, is the necessity for keeping the ordinance simple. He says that, "Ours mentions things like maximum decibel limits in differently zoned areas of the city, between what hours that decibel level must decrease, and maximum decibel levels for motor vehicles, power equipment and the like. But it is still something the average citizen can un-

derstand. We tried to keep the technical jargon to a minimum."

He thinks the relative simplicity of the ordinance is one reason people have become more educated about noise pollution.

"Before, people wouldn't give noise levels a second thought before they went out and bought a power saw, an air conditioner or other noisemaker. Now we get calls practically every day from people asking us to run sound level tests on a piece of equipment before they buy it," Reed added.

Another thing to remember, he says, is that an ordinance can only do so much. He notes that, "We're really only able to enforce the law against fixed or construction equipment. We can't do much about motor vehicles, for example, because we don't have the authority to chase someone down and write them a ticket because their vehicle is exceeding the standards.

"That leads us to another point—if a town is going to pass a noise ordinance, it must be prepared to spend some money to hire and train a full-time administrator. It also should provide him with as sophisticated equipment as possible. By that I mean a sound level meter that

provides a printout of readings as well as a visual measuring. That helps immensely in a court of law," Reed added.

Witschonke tended to disagree on that point: "I really don't see why you need a printout of noise level to prosecute someone. A city doesn't need a radar printout when it confronts a speeder in court—and in an auto you've got a device to measure speed and thus dispute the policeman's word. How are you going to argue that your vehicle wasn't exceeding specified noise levels when there's nothing in or on your car to measure your 'noise pollution?'"

But Witschonke does agree with Reed that the most important thing about adopting noise ordinances is to keep them specific, i.e., simple. He goes a step further, too, noting that ordinances should be written "positively," seeking everyone's cooperation in reducing noise pollution.

"You shouldn't pound people over the head with an ordinance," he said. "It usually works much better if it is worded to elicit cooperation rather than threaten people if they don't comply."

Certification moving slowly but surely

Got any plans for Oct. 21, 1977? If you're a baseball fan, you probably want to settle in for the final game of the World Series. If your tastes run more to the gridiron, you might be mapping strategy to attend the big game the following day. And if you're in charge of certifying private pesticide applicators in your state, you'll have until midnight

to finish the task.

The 1977 date actually contains a year's worth of leeway—October 21 of this year was the original deadline—but even so it's by no means certain the thousands of private applicators in Region V (mostly farmers and ranchers) will be certified on schedule.

Certification is one of the requirements of the Federal

Insecticide, Fungicide and Rodenticide Act (FIFRA) of 1947 as amended by Congress in 1972. Regulations for certifying and other provisions were promulgated by EPA in cooperation with state authorities, although actual certification will be done by the states. In most cases that means the state department of agriculture.



A certified pesticide applicator doesn't necessarily have to do his application from the ground.

But that's just one of several provisions of the amended FIFRA. For farmers and ranchers, it also means that the use of any registered pesticide in a manner inconsistent with labeling instructions is illegal. Perhaps most importantly, pesticides will be classified effective Oct. 21, 1976 for either general or restricted use. General use pesticides (such as the can of roach killer you probably keep under the kitchen sink) may be applied by anyone.

However, restricted use pesticides may be applied only by a certified applicator or by a competent person working under his direct supervision. And therein lies our tale.

First, some background. In 1947, Congress passed the FIFRA to regulate the marketing of pesticides (then termed "economic poisons") and devices using them. The law required federal

registration of pesticides shipped across state lines and made it unlawful to sell, in interstate commerce, unregistered pesticides or substances that had been misbranded or adulterated.

Although the 1947 legislation also provided for federal inspection of such products, it didn't address itself to actual pesticide use. Nor did it control pesticides produced and used within the same state.

Between 1947-72, problems of pesticide misuse and overuse became apparent, despite extensive labeling and use instructions, sometimes causing serious effects on man and the environment. So Congress extended federal regulation to cover all pesticides used in the United States instead of just those shipped across state lines. It also listed stronger enforcement provisions, made pesticide misuse unlawful, and contains a number

of other key regulatory provisions.

Although EPA was given responsibility for developing and publishing standards of competence, the amended FIFRA reflected Congressional intent that the states assume primary responsibility for certification of applicators.

The program is designed to make sure that farmers, ranchers and commercial pesticide applicators who use restricted products are competent to do so without harming themselves, other people or the environment. In most cases, various state cooperative extension services are or will be conducting the training necessary to insure those conditions. However, the states cannot require attendance at formal training programs by everyone seeking certification; those able to pass required tests without training may do so.

In a somewhat oblique endorsement of the need for application certification, the General Accounting Office recently issued a report claiming the federal pesticide registration programs of EPA and the Food and Drug Administration do not adequately protect the public and the environment from pesticide hazards. GAO found the following conditions, according to the report:

- Safety and efficacy data have not been submitted to EPA that support the marketing of many pesticides. The safety data referred to by GAO includes information on cancer, genetic changes, birth defects, etc. Also, safety data is not required for the pesticides as marketed, only for individual active ingredients.

- Reviews of inert ingredients such as vinyl chloride are not subjected to the full range of safety testing.

- Many labels do not comply with the requirements of the law and of the two agencies.

- Pesticide residue tolerances are not adequately monitored or reviewed.

- The safe level of pesticide residues in some foods has not been determined.

- Statutory registration requirements are not carried out on a timely basis.

GAO reviewed the registration files for 100 randomly selected pesticides that should have been renewed as of June 30, 1974, the report continued. Only 14 of the 78 pesticide files had been renewed within the five-year period ending June 30. Additionally, 40 had not undergone any type of review for six or more years.

The GAO report also said the office believed EPA cannot accomplish the required registrations and re-registrations by the October 1976 deadline because it (EPA) lost more than one-third of the two-year registration period as a result of delays in completing the

registrations; has not increased its staff enough to handle the increased workload; and expects to have no major decrease in its registration work.

However, Edwin L. Johnson, EPA deputy administrator for pesticide programs, said, "While the workload of re-registration is admittedly great, we are less certain than GAO that the deadline of October 1976 cannot be met, or at least closely approached."

In Region V, the state certification programs are just getting off the ground. First step in the process is the passage of enabling legislation by the state government. The state certification plan is reviewed by regional personnel and then approved in final form by the Region V administrator.

According to Dr. A. Charles Lincoln, chief of the Region V pesticides branch, the somewhat slow start of the certification program apparently stems from the fact some state officials are waiting for a "final" list of restricted pesticides from EPA headquarters.

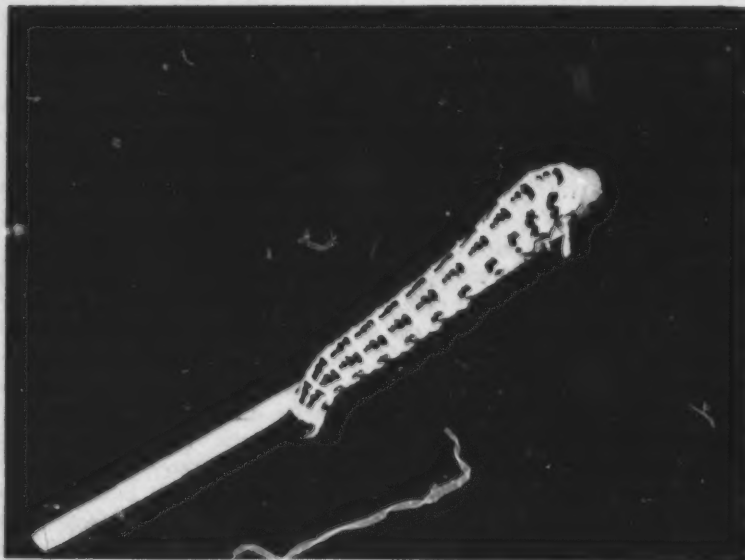
He said, "There really won't be any such thing as a 'final' list, simply because it will be changing almost constantly as new products are added and older ones—no longer considered necessary to restrict—are removed. The preliminary restricted use list now in the hands of the states gives them enough to work with in terms of getting their training programs started."

As EM went to press, only two states, Illinois and Indiana, had passed the enabling legislation; final certification plans have not been approved for any of the six states in Region V.

Here is a state-by-state run-down of how the certification programs will operate and how the training programs are doing.

ILLINOIS

As mentioned earlier, Illinois is only one of two states in Region V that have passed enabling legislation, signed into law Aug. 26, 1975. Juett Hogenkamp, pesticide coordinator for the Illinois Department of Agriculture, says training for private



One pest to feel the wrath of certified pesticide applicators is this pinesaw fly, casually enjoying a succulent pine needle.

"Most of the private applicators approve of the training..."

applicators will consist of a one-time session. Attendees will be given a 28-question multiple-choice "self-evaluation form" to complete upon their arrival. After a discussion of restricted pesticides and their use, the private applicators will be given the same 28-question evaluation to measure what they've learned. Hogenkamp added that about 15,000 private applicators have undergone training so far and, depending upon how many pesticides wind up on the restricted list, as many as another 65,000 may have to complete the program. He says that the general response from farmers and ranchers has been one of agreement, "although there are a few who see little point to it at all."

INDIANA

Enabling legislation was signed into law April 21, 1975 and the certification plan was tentatively approved at Region V on Dec. 9, 1975. According to Dr. Mitchell J. Wrich, head of the Region V pesticide technical support section, the plan was only tentatively approved "until the lead agency (the Indiana State Chemist at Purdue University) responds to legal deficiencies. They include record keeping, definition of 'under direct supervision of a certified applicator,' exemption of farmers receiving financial compensation for applying restricted use pesticides on lands of another farmer, and exempting research personnel from licensing requirements when they apply pesticides to experimental plots."

As for the applicator training, George L. Hutton, pesticide administrator in the Office of the State Chemist, says that training for private applicators (which is

voluntary) is being run by county agricultural advisors. The applicator candidates are given several publications to study and then attend a four-hour workshop covering what they've read. They also complete a worksheet to test their knowledge of such items as pesticide labeling. He added that "Most of the private applicators approve of the training, several having said it's something they felt should have been started years ago."

MICHIGAN

Enabling legislation has not been passed; it is currently in the Senate Consumers and Agriculture Committee. No private applicator training has begun, says Dean Lovitt, chief of the plant industry division of the Michigan Department of Agriculture. "Actually, we hope formal classroom training will be strictly a last resort. We will issue a manual, along with a study guide, for applicators to read at home. They will be given a test on subjects covered in the manual, and only then, if they don't pass, will they probably have to attend some sort of classroom training." Lovitt also said the state plans to conduct "specialty training," i.e., courses tailored for diverse applicator categories such as field crop growers, greenhouse owners, etc. He noted that, "The average farmer doesn't really know where he stands on this matter—whether or not he'll have to be certified. He seems to think he is already pretty well qualified, so why is it necessary to demonstrate his qualifications?"

MINNESOTA

As in Michigan, enabling legislation is still enroute through the statehouse. But according to Dr. Rollin Dennistoun, "training

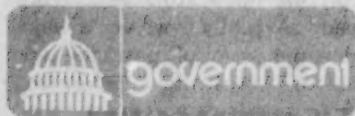
of private applicators is moving ahead. Actually, we've always had some form of pesticide applicator training program, although perhaps not as formal as what we'll have in the future." He adds that training of private applicators is something seen as a continuing program.

At present, programs are run by county extension services around the state that include a two or three-hour lecture on restricted use pesticides. Later on, says Dr. Dennistoun, county extension offices will have books available for take-home use and also will offer audio-visual aids such as movies and slide shows that private applicators may come in and use. Like several of his counterparts in other states, he feels the number of private applicators that will eventually have to be certified depends upon how extensive the restricted list is.

WISCONSIN

Enabling legislation in Wisconsin has not been enacted either; it presently is awaiting the outcome of hearings in the Agriculture Committee. The Wisconsin Extension Service held a training session for agricultural pesticide applicators and structural pest control operators in late January in Madison. And while no certification exam has been announced as part of the program, the training session has been described as the first "official training." According to K. P. Roberts, administrator of the plant industry division of the Wisconsin Department of Agriculture, the big holdup is the lack of an EPA list of restricted use pesticides. He added that this also will bear directly on the number of private applicators Wisconsin will eventually have to certify.

ONCE OVER LIGHTLY



CSC approves 2 new environmental positions

The Civil Service Commission recently gave the go-ahead for the use of two new occupational series—environmental protection specialist (GS-028) and environmental protection assistant (GS-029). Both provide career opportunities for employees and candidates who do not necessarily have degrees in professional fields such as engineering or science.

Included in the environmental protection specialist series are such duties as providing advice and assistance to state and local governments, developing and/or analyzing proposals for new or revised environmental protection regulations, and conducting studies to identify environmental problems.

The assistant series offers applicants the opportunity to perform a variety of technical support work in connection with the operation of environmental protection programs.

Individuals interested in either series should contact their local personnel or Civil Service Commission office.



Bethlehem Steel gets 30-day violation notice

Exceeding allowed standards by more than four-fold has gotten Bethlehem Steel a 30-day notice of violation from Region V enforcement division director James O. McDonald.

The action is aimed at cleaning up particulate emissions from Bethlehem's Chesterton, Ind., facility, where two coke batteries are belching more than 2,215 tons of particulate per year. Allowed emissions under the Clean Air Act of 1970 are 506 tons per year.

Under the act, if the violation continues beyond the 30th day after the notice of violation is issued, the EPA Administrator may issue an order requiring compliance with the Indiana Air Implementation Plan. Additionally, he may initiate civil or criminal actions for appropriate relief.

More light duty vehicles must meet emission regs

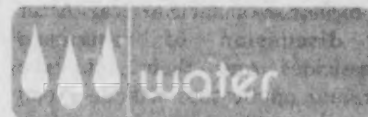
The number of pickup trucks, vans, utility vehicles (off-road vehicles) and some mobile homes that must meet federal exhaust emission standards for light-duty trucks will increase by more than 50 per cent in 1978 under a new EPA proposal.

Additionally, the emission standards for these trucks would be reduced to levels comparable in stringency to those scheduled for 1977 cars.

Current federal regulations classify as light duty trucks those pickup trucks, vans and other trucks weighing less than 6,000 pounds when fully loaded—the gross vehicle weight rating (GVWR).

For light duty trucks, EPA is proposing to raise the 6,000 pounds GVWR ceiling to 8,500 pounds in 1978, resulting in a more realistic grouping of similar vehicles capable of achieving equivalent levels of control. The industry-wide cost to comply with the revised regulations over a five-year period (1978-82) is estimated by EPA at \$830 million.

The proposed regulations appear in the Federal Register of Feb. 12, 1976.



Numerous violations in Indiana NPDES program

Many municipalities, industries and other Indiana entities are not filing monthly National Pollutant Discharge Elimination System reports to the State of Indiana, apparently because they are either unaware of the requirement to do so or are simply ignoring it.

Officials say the poor reporting rate of federal facilities is particularly glaring, although they don't cite any specifics. They note that since Indiana law is patterned after federal law, a violation of the former almost automatically means a violation of the latter.

They add that in cases where reports are late or nonexistent because of ignorance, a simple reminder may be all that's necessary. But in cases where the responsibility is simply ignored, officials say they plan to take vigorous enforcement action.

6 Additional Region V water supplies approved

Water supplies in half a dozen Region V communities have been approved for use by interstate travelers. The certification means the facilities' water quality and bacterial monitoring are in essential compliance with drinking water standards, although not necessarily free of all defects.

The approved supplies serve Carbondale and Hartford, Ill.; Canton and Youngstown, Ohio; and Detroit.



Researchers say plants intensify mercury toxicity

Scientists at the Region V Environmental Monitoring and Support Laboratory in Las Vegas, Nev., have discovered that plants and soils transform inorganic mercury into a much more toxic organic form of the element.

Until now, researchers have believed the transformation took place only in the mud and sediments of streams and lakes where no oxygen was present. The new findings show the conversion also can occur in soils and plants in the presence of oxygen, meaning that mercury may be more of an environmental hazard than previously expected.

Dr. Robert D. Rogers and Dr.

Don D. Gay are investigating the interactions of inorganic mercury with plant and soil systems. They have found that common agricultural plants and soils can change inorganic mercury into organic forms of mercury. Their data show that plants can take up inorganic mercury through the roots or through the leaves. Once in the plant, the mercury can be converted to the organic form.

The research being conducted by Doctors Rogers and Gay is part of a study of environmental pathways of pollutants. The study will provide guidance for design of advanced monitoring systems.

Dr. Rogers' findings are available as report number PB 284221/AS, "Methylation of Mercury in a Terrestrial Environment." It may be ordered from the National Technical Information Service in Springfield, Va. EPA has published the findings in report

number EPA-600/3-75-014. Dr. Gay's work will also be published as an EPA report available from the NTIS.



NTIS seminar slated May 27-28 in Chicago

A two-day seminar to familiarize EPA and state environmental agency people with the National Technical Information Service system for controlling Agency reports will be held in Chicago May 27-28.

The meeting is designed to educate federal and state workers in descriptive cataloging, input processing-accessioning, subject classification, subject indexing, abstracting, announcement and retrieval. All EPA reports are required to be entered in the NTIS system.

News for Government

LOCAL REPORT

Following is a list of communities, jurisdictions, etc., in Region V which received grants from EPA between Jan. 15, 1976 and Feb. 13, 1976. Most of the grants were for construction of sewage treatment projects of one kind or another and totaled \$56,033,206.

ILLINOIS

Addieville, 1/15, \$3,900; Addison, 1/27, \$574,500; Armington, 1/28, \$3,375; Atlanta, 1/30, \$5,625; Carbondale, 2/13, \$64,275; Caseyville, 1/16, \$31,465; Danvers, 2/10, \$2,775; El Paso, 2/11, \$4,500; Elkhart, 1/30, \$3,225; Emden, 1/30, \$4,500; Fairmount, 2/13, \$4,575; Freeman Spur, 1/30, \$4,500; Graffon, 1/26, \$7,200; Hartsburg, 2/6, \$3,225; Lanark, 2/13, \$40,350; Middletown, 2/4, \$3,225.

Monmouth, 1/28, \$33,000; Chicago Metropolitan Sanitary District, 1/29, \$2,400,375; New Holland, 1/30, \$3,225; Oakland, 1/29, \$12,375; Pocahontas, 2/13, \$5,550; Port Byron, 1/28, \$24,975; Prairie City, 2/13,

\$10,500; Rushville, 2/6, \$13,350; Shelbyville, 1/30, \$22,725; Sherrard, 1/30, \$14,250; St. Augustine, 1/26, \$6,150; St. Elmo, 1/26, \$11,100; Summerfield, 1/30, \$4,575; Valmeyer, 1/15, \$7,500; Virden Sanitary District, 1/23, \$43,650; Wyoming, 1/15, \$15,375. Illinois total: \$3,389,890.

INDIANA

Bethany, 2/6, \$2,325; Columbus, 1/22, \$979,350; Elora, 2/9, \$260,100; Hamlet, 1/23, \$5,040; Hammond Air Pollution Control, 2/11, \$42,944; Huntington, 2/9, \$1,195,950; Laurel, 2/10, \$96,900; Muncie, 1/19, \$1,838,100; New Providence, 1/19, \$2,955; North Liberty,

1/23, \$1,260; Shoals, 1/26, \$4,500; St. John, 1/23, \$5,015; Steuben Lakes Regional Water District, 1/29, \$50,570; Whitestown, 2/13, \$14,899; Woodburn, 1/27, \$39,225. Indiana total: \$4,539,133.

MICHIGAN

Allegan, 1/29, \$7,500; Allegan Dept. of Public Works, 1/22, \$43,075; Bay County Dept. of Public Works, 1/28, \$48,072; Berrien County Dept. of Public Works, 1/22, \$1,567,435; Branch County Dept. of Public Works, 1/30, \$75,150; Brown City, 1/26, \$9,900; Cass City, 1/23, \$8,250; Charlotte, 1/29, \$22,350; Clare County Dept. of Public Works, 1/30, \$33,750; Eaton Rapids, 1/30, \$2,016,450.

Gladstone, 2/6, \$16,171; Genesee County, 1/27, \$3,720,250; Greenland Township, 2/13, \$5,325; Greenville, 1/30, \$23,250; Ionia, 1/23, \$334,397; Iron Mountain-Kingsford Sewage Disposal Board, 1/30, \$96,000; Jackson County Bureau of Public Works, 2/12, \$1,708,200; Kalamazoo, 2/9, \$502,125; Lainsburg, 1/30, \$11,850; Leslie, 2/4, \$22,425; Mackinac County Dept. of Public Works, 2/5, \$247,373.

Michigan Dept. of Agriculture, 1/29, \$133,326; State of Michigan, 1/15, \$500,000; Missaukee County Drainage Commission, 1/23, \$61,425; Monroe County, 1/15, \$4,697,550; Morley, 2/6, \$16,950; Mount Clemens, 2/10, \$2,560; Pickford, 2/13, \$2,250; Pottsville, 1/23, \$16,725; Sheridan, 2/9, \$18,225; South Haven, 2/10, \$24,300; St. Clair Dept. of Public Works, 1/16, \$2,330,175; St. Joseph County Dept. of Public Works, 2/12, \$27,525; Three Oaks, 2/6, \$15,000. Michigan total: \$17,385,309.

MINNESOTA

Becker, 1/20, \$10,656; Bird Island, 2/4, \$675; Eitzen, 1/29, \$5,340; Elk River, 1/19, \$36,750; Foreston, 2/13, \$16,350; Glencoe, 1/16, \$36,334; Minnesota Pollution

Control Assn., 1/15, \$300,000; Moorhead, 1/30, \$88,350; Olmstead County Health Dept., 2/11, \$17,307; Ottertail County Commission, 1/23, \$33,750; Pine River, 1/29, \$13,875; Redwood Falls, 2/6, \$6,400; Russell, 1/21, \$4,500; St. Cloud Health Dept., 2/11, \$22,931; St. Louis County Health Dept., 2/12, \$31,291; Winstead, 2/12, \$29,850. Minnesota total: \$654,559.

OHIO

Beach City, 1/29, \$1,454,050; Burton, 2/13, \$29,700; Cleveland Regional Sanitary District, 1/22, \$11,198,775; Cleves, 1/30, \$1,011,150; Conneaut, 2/4, \$28,125; Eldorado, 2/11, \$42,375; Farmersville, 2/13, \$21,975; Malvern, 1/16, \$1,275; Mansfield, 1/30, \$75,225; Minster, 2/5, \$2,250; Montgomery County Health District, 2/4, \$363,923; Painesville, 2/13, \$9,093,300; Stark County Board of Commissioners, 1/15, \$152,250; Tuscarawas County, 1/30, \$142,125; Wood County, 1/30, \$90,000; Wood County Board of Commissioners, 1/30, \$372,925; Wooster, 1/30, \$138,525. Ohio total: \$24,617,948.

WISCONSIN

Alma, 2/13, \$12,750; Campbellsport, 1/29, \$24,450; Dodgeville, 1/21, \$14,400; Effrick, 1/20, \$8,475; Hazel Green, 2/10, \$8,325; Heart of the Valley, 2/10, \$5,980; Kewaunee, 2/12, \$760,125; Luck, 2/6, \$16,950; Madison Metropolitan Sewage District, 2/12, \$29,250; Milan Sanitary District, 1/29, \$11,475; Milwaukee County Metropolitan Sanitary District, 2/10, \$638,100; Oconomowoc, 1/27, \$1,579,575; Oconto Falls, 2/9, \$173,700; Racine County Air Pollution Control Board, 2/11, \$26,520; Rib Lake, 2/4, \$1,717; Superior, 2/13, \$2,048,025; Taylor, 1/22, \$8,550; Walworth County Metropolitan Sanitary District, 1/28, \$78,000. Wisconsin total: \$5,446,367.

FEDERAL REGISTER

JANUARY 13, 1976

Rules

Air quality implementation plans; various States, etc.:
Michigan (2 documents)
Tennessee; correction

Proposed Rules

Air pollution control, new motor vehicles and engines:
Light duty vehicles and trucks; evaporative emission test procedures

Air quality implementation plans, various States:
Alabama; SO, emissions from fuel combustion

Notices

Air pollution; standards of performance for stationary sources:
Delegation of authority to the State of Michigan

JANUARY 14, 1976

Rules

Noise emission standards for construction equipment; portable air compressors and railroads (2 documents)

Proposed Rules

Air quality implementation plans; various States, etc.:
Ohio

Notices

Meetings:
State-Federal Implementation Advisory Committee Working Group on Registration and Classification

JANUARY 15, 1976

Rules

Air quality implementation plans; various States, etc.:
Rhode Island

Air pollution; standards of performance for new stationary sources:

Coal preparation plants

Primary copper, zinc and lead smelters

Products that contain recycled material; guidelines for procurement

Proposed Rules

Air quality:

Control of air pollution from new motor vehicles and engines

Approval and promulgation of implementation plans:

Vermont

Resource recovery facilities; solid waste management guidelines

Notices

Marine sanitation device standard:

California

Michigan

Pesticides, specific exemptions and experimental use permits:

Agriculture Department

Meetings:

State-Federal FIFRA Implementation Advisory Committee Working Group on Certification

JANUARY 16, 1976

Rules

Water pollution; effluent guideline for certain point source category:
Fertilizer

JANUARY 19, 1976

Notices

Marine sanitation device standards:
Lake George

Pesticide chemicals, etc.; petitions:

E. I. du Pont de Nemours and Co

Pesticide registration:

Applications (2 documents)

Pesticides, specific exemptions and experimental use permits:

U.S. Borax Research Corp

JANUARY 20, 1976

Rules

National interim primary drinking water regulation implementation

Program grants; state public water system supervision

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions:

Methomyl

Terbufos

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions:

Pesticide chemical 2,4-D

Terbufos

Notices

Food additive petitions:

Upjohn Co

Marine sanitation device standard:

New Mexico

Pesticide chemicals, etc.; petitions:

CIBA-CEIGY Corp

JANUARY 21, 1976

Rules

Air quality implementation plans:

New Hampshire; revision

Vermont; revision

Notices

Meetings:

Hazardous Materials Advisory Committee; postponement

Science Advisory Board Executive Committee

Pesticide registration:

Pesticide products containing active ingredients; applications

JANUARY 22, 1976

Proposed Rules

Air quality implementation plans:

Idaho

Notices

Pesticide registration:

Applications

JANUARY 23, 1976

Rules

Air quality implementation plans; various States, etc.:

Indiana

New Jersey

JANUARY 26, 1976

Rules

Air pollution; standards of performance for new stationary source:

Primary aluminum industry

JANUARY 27, 1976

Notices

Ambient air monitoring reference and equivalent methods; designations

Meetings:

National Drinking Water Advisory Council

Pesticide registration applications:

Nebraska and New York

Pesticides, specific exemptions and experimental use permits:

Hoffmann-La Roche, Inc

JANUARY 28, 1976

Proposed Rules

Light duty vehicles and trucks; proposed evaporative emission regulations

Notices

Environmental impact statements; agency comments

Pesticide products containing heptachlor or chlordane; objections and request for hearing

Pesticides, specific exemptions and experimental use permits:

South Carolina; DDT formulation on cotton

Registration of a pesticide product; consideration of data by the Administrator in support of a application; correction

Violating facilities, list

JANUARY 29, 1976

Rules

Air quality implementation plans; various States, etc.:

Washington (2 documents)

Water pollution control:

Marine sanitation devices; performance standards

Proposed Rules

Air quality State implementation plans:

Washington

Notices

Pesticide registration:

Applications (3 documents)

JANUARY 30, 1976

Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Key to abbreviations and terms used

Notices

Meetings:

Environmental Health Advisory Committee

Pesticide chemicals in or on raw agricultural products; tolerances and exemptions, etc.:

Ethanedial dioxime

Methyl 2-[4-(2,4-dichlorophenoxy) phenoxy] propanoate

S-[(4-chlorophenyl) methyl] diethylcarbamothioate

FEBRUARY 2, 1976

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Oxytetracycline hydrochloride

Notices

Environmental statements; availability of agency comments

Pesticide chemicals etc.; petitions:

Elanco Products Co

Pesticide registration:

Applications

Pesticides, specific exemptions and experimental use permits:

American Cyanamid Co

Chevron Chemical Co

Ciba-Geigy Corp

Forest Service

Mitchell Manufacturing Corp

FEBRUARY 3, 1976

(No Listings)

FEBRUARY 4, 1976

Notices

Ambient air monitoring; reference method designation

FEBRUARY 5, 1976

Rules

Air quality implementation plans; various States, etc.:

Oregon

Water pollution control:

Special monitoring study for organic chemicals;

designation of public water system

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:
Bacillus Thuringiensis, Berliner

Notices

Availability of document, "Policy Statement on Use of the Concept of Photochemical Reactivity of Organic Compounds in State Implementation Plans for Oxidant Control"

Environmental Radiation Protection for Nuclear Power Operations; deferral of public hearing

Meetings:

Administrator's Pesticide Policy Advisory Committee
State-Federal FIFRA Implementation Advisory Committee

Pesticide programs:

Clarification regarding future availability of "Guidelines for registering pesticides in the United States" from Government Printing Office

FEBRUARY 6, 1976

(No Listings)

FEBRUARY 9, 1976**Notices**

Pesticide; filing of petition:
American Cyanamid Co

FEBRUARY 10, 1976

(No Listings)

FEBRUARY 11, 1976**Notices**

Air quality standards; ambient monitoring applications:
Beckman Instruments, Inc
N. V. Philips' Gloeilampen-fabrieken
Thermo Electron Corp

Meetings:

Mobile Source Air Pollution Control
National Drinking Water Advisory Council
Pesticide applicator certification; State plans:
Mississippi

Pesticide chemicals, etc.; petitions:

Uniroyal Inc

Pesticides, specific exemptions and experimental use permits:

Pennsylvania State University

Waste, solid; treatment, management, etc.:

Alternate techniques for best practicable treatment; supplement

FEBRUARY 12, 1976**Proposed Rules**

Air pollution control, new motor vehicles and engines:

Light duty trucks

Water pollution control:

Discharge elimination system, National; silvicultural activities

Notices

Pesticide registration:

Applications (2 documents) - 6314,

FEBRUARY 13, 1976**Rules**

Air quality implementation plans:

Connecticut; revision

Residential, commercial, and institutional solid waste; storage and collection guidelines

Notices**Meetings:**

Ecology Advisory Committee

Pesticides, specific exemptions and experimental use permits:

Armak Co.; undecanol on flowers

*U.S. Government Printing Office: 1976 - 650-516 P.O.: NO. 6/Regional V-1.

ENVIRONMENT MIDWEST
ENVIRONMENTAL PROTECTION AGENCY

Office of Public Affairs

230 South Dearborn

Chicago, Illinois 60604

THIRD CLASS

POSTAGE AND FEE
ENVIRONMENTAL PROTECTION AGENCY

EPA-335

LOU TILLEY, LIARN
REGION V LIR, EPA
230 S. DEARBORN ST
CHICAGO IL 60604



Return this sheet if you do NOT wish to receive this material, or if a change of address is needed. (Indicate change, including zip code.)



Environment Midwest

REGION V
UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY

APRIL 1976

**Mahoning mills
granted exemption
Page 3**



**NPDES program
shifts emphasis
Page 4**

**Charting a course
for Lake Superior
Page 7**



'I'm here to listen'

There's a lot of strong feeling throughout this country that government has gotten too big—that it's not listening to the people, that it's over-regulating business and people's personal lives.

As far as the environment goes, most people in the Midwest and throughout the country continue to be concerned about clean air and water. They worry about toxic pollutants in their streams and drinking water. They worry about dangerous wastes that still aren't regulated. And they want to see more progress in cutting down on air pollution and noise and solid wastes.

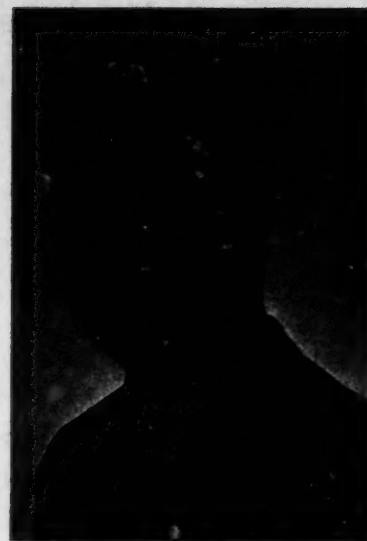
At the same time, this nation and region are starting to recover from an energy crisis and a difficult recession. There is strong emphasis on restraint in regulation and a strengthening of economic recovery. People are still worried about jobs—finding them and keeping them.

These are not easy times to be involved in the fight for a cleaner environment. Having been in this job just a short time, I am acutely aware of the very difficult problems all of us in the Midwest face in trying to continue the fight for pollution cleanup and at the same time maintain a healthy economy. In the Mahoning Valley, in Silver Bay, Steubenville, Gary, Cleveland and Detroit and in all the major areas in Region V, this EPA office and your state and local environmental agencies find themselves faced with a tough day-to-day fight to keep pollution cleanup on the front burner while making sure the other needs of people are met.

This Midwest region is abundant in farmland, in industrial development and recreation. It has one-fifth of the population and one-fourth of the manufacturing activity in this country. So quite naturally, this is where the action is in the environmental movement. This has been so for the first five years of the movement and will continue to be so in the next five years as well.

My job as the new regional administrator will be to continue to keep up the fight for clean air and water. This Midwest region of EPA has the best record in the nation in air and water cleanup and I mean to keep it that way.

In addition to keeping on the pressure for cleanup, I will have two other special concerns as regional administrator. First will be to make sure the Great Lakes continue to receive recognition as a national resource and as a national pollution cleanup priority. The 1972 American-Canadian agreement established a special Great Lakes cleanup effort and I am committed to supporting strong, vigorous, national efforts to preserve this unique gift.



GEORGE R. ALEXANDER JR.

My second priority concerns you—the readers of *Environment Midwest* and the people of Region V. I want to hear from you. I sincerely believe in listening to people. We in government tend to do a lot of preaching. I want to do some listening, but I also want to act on your suggestions and recommendations.

It is very important in the next few months I get a chance to listen to what you have to say about environmental problems, environmental cleanup and the way EPA is generally progressing.

Let me hear from you. If you've got questions, comments or suggestions, send them to me. I'll report back to you both by mail and through this column. If we really want environmental cleanup to take place, we're going to have to work hard together. No one person or small group of people can make it happen by themselves.

Since I am new, I am especially open to new ideas and ways of making EPA here in the Midwest work better. This is your government agency. You pay taxes to keep it operating. Let me hear from you.

Environment Midwest is a monthly newsletter published by the Public Affairs Office, Region V EPA, 230 S. Dearborn, Chicago, Ill. 60604.

George R. Alexander, Jr. Administrator
Valdas Adamkus Deputy Administrator
Frank Corrado Public Affairs Director
Matt Racki Editor

EPA exempts Mahoning area steel mills from water deadlines

Youngstown, Ohio—an "ideal site for industrial might" as the city motto reads—has been getting quite a bit of attention from the U.S. EPA recently.

Throughout the recent years of environmental fervor, the community, from political leader to school child, has remained strongly behind its polluting industries. "Jobs, not fish," has been a resounding community slogan.

The reasons are obvious—this is one of the oldest steelmaking areas in the U.S. and, more importantly, the jobs of 24,000 of its citizens (13 per cent of the total employment in the Mahoning Valley) are directly attributable to the plants which stretch for 24 miles along the Mahoning River valley.

EPA, which in 1974 undertook an economic study of the impact of installing pollution controls on marginal facilities in the valley, has been very conscious of the problems associated with such action.

That study, released recently, concluded that if the steel industry in the Mahoning Valley had to match the results of water cleanup in other areas, both U.S. Steel and Youngstown Sheet & Tube could not operate profitable facilities there. And Republic Steel Corporation would not be able to rise much above 1 percent profit.

So EPA Administrator Russell Train announced on March 7 that the community would be given relief from imminent deadlines for water cleanup.

In taking the action, EPA said that "severe economic and employment disruptions" would result if the older steel plants were forced to meet the same standards as other mills.

The decision basically means that the plants won't be required to meet 1977 effluent standards on time, although they are not being exempted from having to spend \$150 million to meet air quality standards. However, they will be required to meet 1983 effluent standards, unless variances are granted.

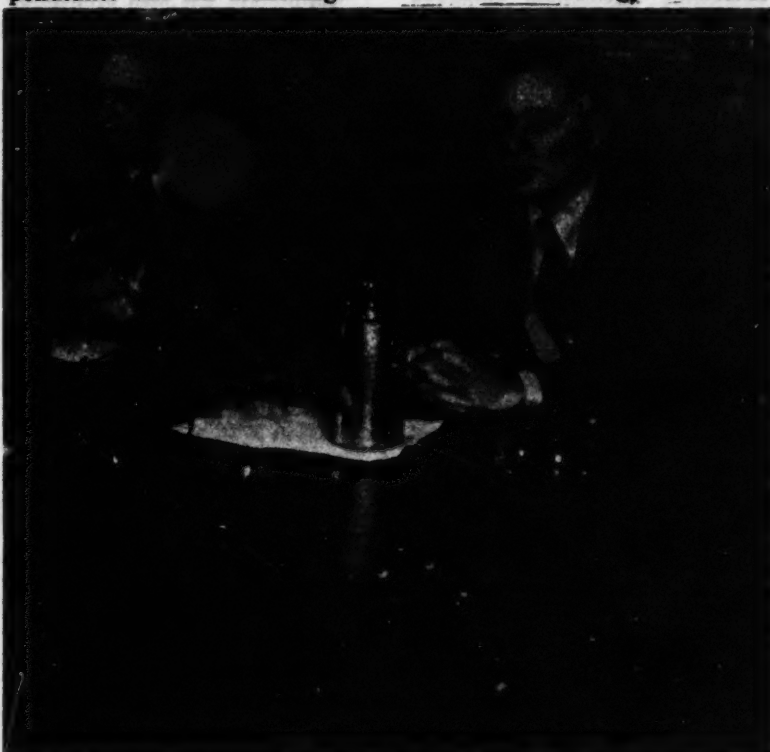
The aging, pre-World War I plants are mostly of the open hearth variety and thus less efficient than the newer basic oxygen and electric steel furnaces.

EPA feels the water pollution exemption granted the eight plants could mean savings of from \$30-60 million in installation of new equipment to reduce discharges of oil, grease and other pollutants into the Mahoning.

Paul Brands, EPA deputy administrator for planning and evaluation, said immediate compliance with current water standards (set in 1972) would have cost U.S. Steel \$40 million, Youngstown Sheet & Tube \$111 million, and Republic Steel \$55 million.

He added that if all three companies must comply by 1983 with no variances granted, the cost could be three times those amounts or more.

However, James McDonald, chief of the Region V enforcement division, said variances would be granted only on a case-by-case basis if the corporations could show a "no profit" situation as the result of the imposition of best available technology standards.



Region V Administrator George R. Alexander (left) and Enforcement Division Director James O. McDonald meet the press in Youngstown.

In a meeting in Youngstown, Region V Administrator George R. Alexander outlined the requirements concomitant with relaxation of water standards:

- All three corporations must obtain NPDES (National Pollutant Discharge Elimination System) permits. They will be good through 1978 and stipulate the mills are using the "best practicable treatment" to clean up the Mahoning.

- The eight mills may not

discharge more effluent into the Mahoning than they are at present, and must allow inspection by either the Ohio EPA or the U.S. EPA.

- All firms must obtain second discharge permits, good for five years after the first expire. They would run through 1983 and demand the affected plants use "best available technology" to minimize river pollution.

Alexander was back in Youngstown recently to look at

the air pollution situation there, and said he felt the steel companies are working in good faith to reduce air pollution and comply with the Clean Air Act.

EPA will be sending out smoke readers during the next month, he added, to get a better fix on just what has to be done to bring the industries into compliance. Alexander said that relief granted in water cleanup should allow the industries to better tackle the air problem.

NPDES
program
switches
emphasis

BY JANE WISSEMEES

The focus of attention within the National Pollutant Discharge Elimination System (NPDES) permit program has switched from issuing permits to letting permittees know EPA means business in the fight for clean water.

Basically, a permit is a contract between a discharger and a governmental agency. It outlines what the discharger is allowed to put into the water, and how often it must be measured. Reports are submitted to the state environmental agency and EPA.

"The first step was issuing the permits," said Al Manzardo, chief of the Permits Branch. "EPA received an education along with industry and other dischargers. Drafting an applicable permit for the facility's discharge was quite an experience. It required hours of hard work analyzing data."

Four of the six states in Region V have all of their major permits issued. There are 54 major



Clean water like this is one goal of a stringent NPDES program.

permits to be issued in Ohio and nine in Minnesota. They are in various stages of the process, with the majority in the adjudicatory hearing and court appeal stage. The hearings can take from 10 days to six months and the possible delay in water cleanup is a very real problem because no enforcement actions can be taken until the permit is issued.

Earlier on, some of the smaller permittees made excuses for not filing a monthly report on what they are discharging into the water.

"They just didn't know how to fill out the forms, how to monitor

for discharges. It was a whole new ball game," said Carol Foglesong, chief of the Compliance Unit.

It should be remembered this was the first time out for all involved in NPDES. The lack of any previous model that was as comprehensive added to the problem. Permits Branch people often felt like explorers in a new land.

The upcoming stage of the clean water effort is the decisive factor. Involved in this important stage are five of the six states in Region V which have requested and received authority to take over the permit program in their respective states.

How program works: a hypothetical case

A mid-size company, the ABC Corporation, located in Middletown, Ill., applied for an NPDES permit in July 1973. On Oct. 18, 1974, EPA issued the corporation permit number IL0000001.

It established interim and final effluent limitations for BOD-5 (the amount of dissolved oxygen consumed in five days by biological processes breaking down organic matter in an effluent), total suspended solids, and iron. The final limits will take affect May 30, 1977.

The schedule of compliance in this permit requires ABC to develop preliminary plans by a set date, submit final plans, start construction, and complete construction in order to meet the final effluent limitations.

The ABC Corporation submits required quarterly reports to EPA on the results of tests conducted on the plant effluent. In January 1976 a violation of the interim total suspended solids and iron effluent limits occurred. ABC also failed to start construction

on schedule, forcing EPA to send a warning letter.

The warning letter did not prod ABC back into compliance with the conditions of its permit, so EPA took a more formal action—it issued an administrative order. The order required ABC to start construction within 30 days and to spell out a plan to meet the total suspended solids and iron limits.

The AO succeeded in getting the ABC Corporation back into compliance; if it hadn't, court action may have been taken.

Indiana, Michigan, Ohio and Wisconsin are immersed in issuing permits and tracking them for compliance, but it is the followup enforcement aspect which will determine the credibility of the program. If NPDES is to be respected as an effective tool for cleaning up the water, it must have a quick and fair way of getting a violation corrected.

Foglesong sums this up, "We are going to face tough enforcement situations in the coming Fiscal Year 1977 as we get past the warning letter stage. But these will be dealt with because those of us in the states and at EPA want cleaner water."

The five states have taken a total of 1,093 formal enforcement actions in the first half of FY76 alone. In the same time period, EPA has referred 59 violators to the local U. S. attorney for formal enforcement action. The Agency also initiated 334 informal enforcement actions.

Under the Federal Water Pollution Control Act of 1972, the states have primary responsibility for implementation of the permit program. EPA has an

overall responsibility designed to monitor national uniformity in the NPDES program.

During FY76 the Enforcement Division established a procedure whereby at least quarterly visits are made to each state agency which has taken over the NPDES permit program.

These visits are "shirt-sleeve" sessions where staff members get together and critique the Quarterly Noncompliance Report, which includes a list of dischargers who have violated their permit during the preceeding three months. They also talk about evolving problems or new situations, and EPA has an opportunity to audit several major permittee files.

"We have established a team concept of state assignees within the Water Enforcement program with EPA staff teams working on just one or two states. It is important for good communication that the state staff members know whom to call on EPA's staff with any question," said Dale S. Bryson, Water Enforcement Branch chief.

Each of the states in Region V have unique strengths and

weaknesses.

"Illinois has yet to come in and ask for the authority to administer their own permit program," comments Foglesong. Illinois issues notices of violation of their state operating permits and at the same time informs the permittee they are also in violation of their NPDES permit.

"The result has been confusion on the part of the permittees in Illinois as they don't know who to turn to or listen to," Foglesong emphasized.

Indiana is much further along. Currently, the Division of Water Pollution Control is busy solving the time lag of approximately 80 days between learning of a violation and taking enforcement action.

Ideally, such action should be initiated for major permittees within 30 days after the agency has become aware of a violation.

Joseph H. Snyder of the Indiana State Board of Health, states, "The main strength of our enforcement program is the ability to detect all violations of the permits."

Indiana has made a strong commitment to enforce NPDES

permits, essential for an effective water cleanup program.

Dr. Jim Truchan, division permit coordinator for the State of Michigan, explains the situation there.

"Most of the time permittees just didn't understand the language of the requirements. However, they know that compliance is expected and that they must do whatever is necessary to achieve compliance."

Michigan's track record in permittee compliance shows that

communication is an important tool in striving to clean up water pollution.

Minnesota works hard at heading off confrontation, perhaps because of their experience with the long, drawn-out case of Reserve Mining.

"We have reminder letters that go out in advance of an event, rather than waiting for a deadline to elapse," explains Russell Felt, head of the Enforcement Unit of the Minnesota Pollution Control Agency. The reminder letters help to keep the permittees' required

reports coming in on time.

An important aspect of the NPDES permit program is best practicable technology (BPT) and best available technology (BAT), which industries are required to use by 1977 and 1983, respectively.

BPT and BAT take into account such factors as age of equipment, facilities involved, process employed and process changes, engineering aspects of control techniques, and environmental impact apart from water quality (including energy requirements.) In assessing best practicable technology for a particular category of industry, a balance is struck between total cost and effluent reduction benefits.

For example, there are eight major permits issued to pulp and paper mills in Minnesota; the wood fiber industry uses and discharges more water than most other industries. Seven of the eight mills are expected to meet the July 1, 1977, deadline for best practicable control technology for waste treatment.

In Ohio, although the state EPA has suffered staff cutbacks, their permits section feels they will overcome that obstacle and carry on an effective water cleanup program.

Ernie Rotering, chief of the Office of Waste Waters, is confident that the Mahoning River permits will be issued shortly. This area has a concentration of eight steel plants, and there was concern that applying the new regulations to those plants might result in severe economic and employment disruption due to the size, location and age of the mills. (See story elsewhere this issue.)

Wisconsin's strength is its computerized tracking system. Called Violations and Enforcement Activities (VEACT), it contains the quantity and quality of information needed by the state to quickly determine the status of

Here are some of the more serious permit violations in Region V:

ILLINOIS

Airco Industrial Gases, East Alton—failed to start construction of control facilities.

Allied Chemical, Metropolis—failed to complete construction.

City of Condon—failed to obtain operational level.

Chemetron, Monee—failed to submit preliminary plans.

Commonwealth Edison, Crawford, Dixon, Fisk, Joliet, Lockport, Ridgeland, Sabrook plants—all failed to submit plans.

DuPage County Dept. of Public Works—failed to submit final plans and to start construction.

Jones and Laughlin Steel, Hennepin Works—failed to submit preliminary plans.

Koppers Co., Galesburg—failed to submit final plans and notification that construction had started.

INDIANA

City of Brownstown—exceeded permit limits.

Dana Corporation, Hagerstown—failed to submit notification of completion of construction.

East Chicago—exceeded permit limitations.

Gary—failed to submit self-monitoring data.

Industrial Liquid Waste Disposal, Columbus—exceeded permit limits on toxic substances.

International Harvester, Indianapolis—failed to submit final plans.

Michigan City—failed to submit industrial surveillance report.

Mid-States Steel and Wire, Crawfordsville—exceeded permit limitations.

MICHIGAN

Allied Chemical, Sarnet Solvay Division Tar Plant, Detroit—failed to complete construction.

Drug Research Inc., Adrian—failed

to start and complete construction.

Ford Motor Company, Monroe—failed to start and complete construction.

Longworth Plating Company, Chelsea—failed to start and complete construction.

Michigan Chemical Corporation, St. Louis—failed to complete construction and attain operational level.

MINNESOTA

Fairmont Wastewater Treatment Plant—effluent violations.

Potlatch Corporation, Brainerd—effluent violations.

Virginia Wastewater Treatment Plant—effluent violations.

OHIO

Ashland Petroleum Company—failed to submit notification of start of construction.

Buckeye Steel, Franklin—failed to submit general plans.

Circleville Sewage Treatment Plant—not properly reporting discharge parameters.

Container Corporation of America, Circleville—exceeded effluent limits.

Elyria Sewage Treatment Plant—failed to submit general plans.

Montgomery County, Bear Creek Plant—failed to submit infiltration inflow analysis.

Zanesville—failed to submit industrial users report.

WISCONSIN

Beloit Sewer Utility—effluent violations.

Brookfield—effluent violations.

Consolidated Papers Inc., Appleton—effluent violations.

Nekooska Paper Inc., Port Edwards—effluent violations.

Owens Illinois Forest Products Division, Tomahawk—effluent violations.

compliance of the dischargers.

John LaFountaine, Wisconsin's chief of the Permits and Orders Section, adds, "VEACT's weakest point is that it doesn't provide a way to summarize information on all permittees within the state. All the specifics are there, but the report is very voluminous."

Even so, he adds, the state knows who is in compliance and who isn't, and can take enforcement actions promptly to require compliance.

Smaller permittees have generally had a problem understanding their permits and doing the necessary testing. Each state has had to deal with this situation and work with the small

permittee to find a solution.

For instance, informal public meetings on NPDES were held in Indiana, Michigan and Wisconsin. These "accountability sessions" are held because of public concern for water cleanup.

"Public meetings are the best forum for state and federal officials to get together and answer questions from the people whose lives they affect," said Foglesong.

In addition to the problem of minor permittees, NPDES has to contend with construction grants.

Russell Felt of Minnesota sums up the problem: "Because the Federal Water Pollution Control Act allots construction grants for municipal sewage treatment funds, we have been forced to

grant extensions to the municipalities that are behind schedule because construction grant funds were not available."

EPA is working with the states to release the \$18 billion that the President and courts have released. Hopefully, in this case money will buy one of the things in life that used to be free—clean water.

The states and EPA know that the only way to get clean water is to issue the permits, track compliance and take necessary enforcement actions. And they all have active programs to assure that this happens.

Cleaner water should be the end product.

Lake Superior must be saved; now how do we go about it?

(First of Two Articles)

By Matt Racki

"I would call this conference a kind of living environmental impact statement. We are going to gather together a number of people representing different viewpoints and find out . . . what they think about the possible increased use of Lake Superior for the transportation of oil and other hazardous materials."—Peter L. Gove, executive director, Minnesota Pollution Control Agency.

The conference lasted two and a half days and when it was over, there were still as many different viewpoints as there were when it started.

Someone said all shipping should be banned from Lake Superior. Someone else thought that not only should shipping not be banned, but that

everybody better resign themselves to the fact it's going to increase.

In between those extremes came a plethora of ideas, gut feelings, hunches, papers, statistics, charts, overhead projections, slides and monographs representing just about the full 360 degrees of the proposition.

The scene was Duluth, Minn., the conference was "Lake Superior—A resource Imperiled." sponsored by the MPCA in cooperation with the Upper Great Lakes Regional Commission and the University of Minnesota. Purpose of the meeting was to deal with transshipment of hazardous materials on the largest of the Great Lakes.

Stewart Udall, former secretary of the interior, said during the keynote address that

he was "amazed" that Reserve Mining Co. taconite tailings are still not out of Lake Superior seven years after his last visit to Duluth.

At a press conference prior to his keynote speech, Udall told reporters that, "It appears someone, years ago, made the decision that Reserve would spend its money on lawyers rather than on facilities."

The former Arizona congressman added that, "I hope they (Reserve) are serious in their expressed desire to switch to on-land disposal. If they aren't, that is the most sordid kind of irresponsible corporate conduct."

That evening, Udall told a crowd packed into the Radisson Duluth Great Hall that, "Important decisions for this region will have to be made soon. Small mistakes now can be



Some panelists at Lake Superior conference in Duluth await next question from their audience.

big mistakes later."

He said that at present rates of usage, the U.S. and Canada will be out of oil in a couple of decades, so naturally the demand for coal will escalate.

(An editorial the following day in the Duluth News-Tribune agreed with Udall. It noted that, "... Lake Superior will soon become a major transportation corridor for shipping sources of energy—coal and oil. If we don't plan this development with considerable precautions, we could ruin the lake.

"When coal was shipped up the lakes 60 and 70 years ago, the only thought was that it was good business. Today, that thought alone is not enough," the editorial added.)

Udall summarized by listing several lessons he had learned in the seven years since he left government service.

- Major decisions should be approached deliberately. If a new pattern of transport is to be established on the Great Lakes, it should not be plunged into until the consequences are examined.

- Dangers to human health in industrial decisions have been understated.

- The resilience of natural phenomena like the Great Lakes should not be underestimated.

- One should be skeptical of growth predictions of the past. Basic American thinking was that growth was normal and would continue, but as a matter of fact, electric power consumption has reached a plateau and gasoline consumption has not increased.

- If there is serious doubt as to the impact of a project, forget it. "We should no longer gamble on human health."

- As we plan resource uses, we should not accept the destruction of its other uses.

- Take the long view. "If any crimes have been perpetrated by my generation," Udall said, "it is the squandering of resources. Other generations have the right to them and we must respect those rights.

- If some human error can create a dangerous situation, an accident will happen someday (Murphy's Law.) The consequences of a nuclear power plant mishap, for example, are so great that we should be very aware that we all make mistakes, even the best nuclear engineer.

- Don't make snap

decisions—act only after mature deliberation.

Although Udall's remarks were well-received, the fact there would hardly be unanimity on what course the future of Lake Superior should follow was pointedly demonstrated a week before the conference even opened.

In a letter to the editor of the News Tribune, a Silver Bay resident said that, according to a report to the International Joint Commission from the Great Lakes Research Advisory Board, six Great Lakes cities had a higher millions of fibers per liter ratings in their water than Duluth's 1.6.

His question was, "Why is the city on the bottom of this list the only one that has a scapegoat (an obvious reference to the Reserve Mining Co.) on which to blame its fiber problem?"

Still, the conference began on an upbeat note the day following Udall's keynote speech. Each of four sessions that constituted the bulk of the meeting was divided into an introduction, an overview, a presentation, a panel discussion about the immediately preceding talk and then an

audience participation session.

Session one was devoted to an assessment of the environmental effects of transshipments of hazardous materials on Lake Superior. The presentation, "Potential Damage From Toxic Materials in Lake Superior," was made by Dr. Donald I. Mount, director of EPA's National Water Quality Laboratory in Duluth.

During his address, Dr. Mount delivered the disheartening news that fish in a lake on Isle Royal (in western Lake Superior) have a high PCB concentration. What made the revelation disheartening, according to Dr. Mount, was that there have never been any vehicles or spraying operations on the island, yet the PCBs still managed to get into the fish population.

His conclusion was that the fish constituted "living proof that PCBs can be dropped into bodies of water through rainfall as well as by more direct means."

As for oil spills, Dr. Mount noted that, except for a toxic and volatile fraction that quickly evaporates, oil and petroleum products are relatively nontoxic and will decompose. The greater concern, he felt, should be over the shipment and possible spillage of chemicals that are

toxic at concentrations as low as one part per trillion.

But he stressed that several preventive measures could lessen the hazard of shipping chemicals. For example, cargo could be containerized and shipping limited to certain seasons when fewer accidents occur. Also, shipping could be prohibited or restricted in the more biologically sensitive areas of the lake, said Dr. Mount.

During the panel discussion that followed, one member urged that there be no increase whatsoever in the shipment of toxic substances, let alone to the degree predicted.

Another panelist, Dr. Roger D. Anderson, head of the department of advisory sciences at the Virginia Institute of Marine Sciences in Gloucester Point, reminded the audience of the recent kepone contamination and resultant closure of the James River to fishing.

He added that while it was necessary to be aware of the possible hazards involved in oil shipments, "We should also be alert to the possible hazards of things we can't see or understand as well."

But it was for Harvey H. Clare to stake a position really opposed to that generally prevalent so far.

The head of the environmental protection division of the Imperial Oil Co., Toronto, in a paper responding to that of Dr. Mount, said that, "... I am inclined to comment that the title of this conference might well be, 'Lake Superior—A Resource Imperiled?' I cannot bring myself to view Lake Superior as being in immediate peril from the transshipment of hazardous materials."

Clare said the first paragraph of the Great Lakes Water Quality Board's 1974 annual report supported his contention: "The water quality of . . . Lake Superior, Michigan and Huron is generally very good. However, problem areas exist, generally related to point source discharge or tributary inflows."

His point was that the cause of any existing maladies with Lake Superior were caused by point sources, not transshipments.

Clare summarized his paper with the remark that, "In my opinion there is an ample body of laws and regulations on both sides of the border to ensure the survival of Lake Superior against even the most unconscionable acts of citizens, municipalities and corporations."

(Continued next month)



Lake Superior is a prime recreation area for outdoors aficionados like these Ely, Minn., canoeists.

ONCE OVER LIGHTLY



Meet some 'Beavers' who don't dig pigeons

Residents of Beaver, Ohio, have been getting extremely soft water from their tap recently—soft as a feather that is—but they don't like it one bit.

The problem is pigeon feathers; the unwanted guests in the city's wooden water reservoir have been fouling the water supply to the point where about 350 Beaverites(?) have complained of getting pigeon feathers from their water taps.

A temporary solution has been reported, however. The town council approved the purchase of some rubber snakes which were placed at various points around the wooden tower and have frightened away all but the most heroic birds.

Seeking a more permanent solution, the town council has applied for federal funds to build a new water storage tank.

IJC says bolster '72 water quality pact

The International Joint Commission reports that the 1972 Great Lakes Water Quality Agreement signed by Canada and the United States should be strengthened by incorporating compliance dates.

In its third annual Great Lakes Water Quality Report to Governments, covering 1974 and parts of 1975, the commission says that efforts to enhance water quality in the lakes have increased each year since 1972. However, the report cautions that public perception of the cleanup timetable is distorted.

For example, many residents in the Great Lakes area believed that between 1972-75 the lakes were to be fully cleaned up. Not so, says the commission. Control action on some pollutants resulted in almost immediate effects on the lakes, but the effects of other pollutants may take 15 years or more to disappear once their discharge is stopped.

Copies of the report are available from the IJC Regional Office, 8th Floor, 100 Ouelette Ave., Windsor, Ontario, N9A 6T3. The telephone numbers are 519-256-7821 in Canada and 313-963-9041 in the United States.

Canoe trip highlights Michigan's 'CC-76'

A 10-day canoe trip from Jackson to Grand Haven is one of the focal points of "CC-76," sponsored by the Michigan Grand River Watershed Council.

The trip is part of a public involvement program to create greater awareness of the existence and conditions of Michigan's streams. The capital letters "CC-76" are the Roman numerals representing America's 200th birthday; 76 is the year of the event.

For more information write the council at 3322 W. Michigan Ave., Lansing, MI 48917 or phone 517-489-0552.

Cleanup efforts in Lake Erie failing

According to a recent Army Corps of Engineers report, present efforts to clean up Lake Erie will not be enough to do the job. The report names phosphorous as the major pollutant responsible for the advanced aging of the lake.

The Corps has estimated (using new research methods) that as much phosphorous comes from runoff as it does from sewage treatment and industrial sources. Consequently, it will investigate how phosphorous discharge is related to the ways farmers plow their fields, the times of the year they spread fertilizers and how much fertilizer they use.

PCB discharge found in Indiana creek

A discharge of polychlorinated biphenyls (PCBs) has been discovered in Clear Creek, downstream from the Bloomington South Sewage treatment plant, according to Ralph C. Pickard, assistant commissioner for environmental health of the Indiana State Board of Health.

According to Pickard, investigators from his agency and Region V are surveying the area to determine the source of the contamination. He stressed that the waters in question are downstream from the Monroe Reservoir and that it is not affected by the discharge.

Monitoring programs will be initiated, including one which will focus on flood control lakes managed by the U.S. Army Corps of Engineers.

Amoco Oil to spend \$15 million on Ind. plant

A \$15 million activated sludge water treatment plant that will bring water quality up to 1977 EPA standards will be built by Amoco Oil Co. on the Lake Michigan shoreline near Whiting, Ind.

The plant, capable of treating 24 million gallons of water daily, is targeted for a July 1977 completion. An Amoco spokesman said the project was strictly intended to help meet EPA standards.

EPA plans Ohio River study this summer

EPA is scheduled to launch by the end of June a 30-day study into the environmental effects of the increasing number of power generating plants along the Ohio River.

According to Stephen Gage, EPA deputy administrator for energy, minerals and industry, the river basin will be studied from the West Virginia border to the river's confluence with the Mississippi River near Cairo, Ill.

He noted that researchers will be looking specifically at the effects of increased air and water pollution from the coal-fired and nuclear generating plants proposed or already under construction. Particular emphasis will be directed, Gage said, to studying the cumulative effects of chemical and hot water discharges from the plants.

Agency won't try to curb farm water pollution

EPA has decided not to try and reduce water pollution from most farming operations for the time being, although a "serious problem" exists, according to John R. Quarles Jr., deputy administrator.

He said modest new regulations recently proposed "avoid

throwing a monkey wrench into agricultural operations while we're developing a system to control agricultural pollution. It also avoids the need for thousands, or even millions of farmers to go through a confusing, burdensome process of submitting permit applications.

But Quarles added that, "However, in the next several years we hope we'll be in a position to bring along better pollution controls. The proposed regulations would exclude most farming and forestry operations from any controls, pending more study of the levels at which effluents are harmful.

The Agency also said waiver of the requirements was necessary "because of lack of pollution control technology and effluent guidelines." Action to control the pollution of streams by runoffs of pesticides, herbicides and chemical fertilizers had been sought by environmentalists but opposed by farm organizations.



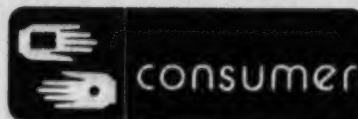
Mercury pesticides ban delayed until June 30

In response to petitions from several producers of pesticides containing mercury, EPA Administrator Russell Train has postponed until June 30, 1976, the effective date of his recent ban on the production of most mercury pesticides.

Registrations for uses of mercury in paints and coatings, on turf, for seed treatment and for many other purposes were cancelled Feb. 17, 1976.

Certain makers of paint and turf fungicides containing mercury argued that an immediate ban would cause serious economic and social harm. They also cited the absence of an imminent

hazard from the use of mercury pesticides and have requested a delay until federal courts have ruled on several lawsuits challenging the cancellation.



Gee, fellows, don't be chicken about this!

Ohio farmers suspect there are foul doings underfoot concerning new federal regulations on what is formally referred to in Washington as "chicken droppings."

Acting under a federal court order, EPA has issued new guidelines on what to do with "animal wastes" from livestock feedlots pumped into sewers and waterways. The new guidelines would make the operators of small feedlots liable for federal inspection and licensing of their chicken droppings disposal methods.

Said Ivan Cooper of the Ohio Farm Bureau Federation, "I can see a problem when you've got 40,000 to 50,000 chickens running around and the, er, droppings have to be put into streams. But some people just have about 7,000 chickens and it's unfair to license and over-regulate them."

EPA said it studied the problem for some months before deciding to clean up the situation, and that it was not intended to work hardships on small farmers—or their chickens.

Columbus residents say thanks, but no thanks

Officials of Columbus, Ohio, are considering a 250-acre experiment of spreading rather than incinerating sewage sludge to see if any money can be saved.

However, one Columbus city councilman reminded his peers at a recent meeting that residents near the experimental site

complained violently when the city considered hauling trash to the area, adding that, "I don't even want to think about what they would say about sewage sludge."

He said owners of the property adjacent to the 250 acres already have decided they will take the city to court if it attempts to spread the sludge.

Conference scheduled on alternative energy

A two-day conference on "Alternative Energy Sources—Technology and Application" will be sponsored by the Minnesota Energy Agency and 33 co-sponsors April 27-28 in Bloomington.

The program will include 27 scientists, engineers, government leaders and industry experts who will discuss energy from the sun, wind, agricultural and timber residues, peat, solid and animal wastes, as well as energy-efficient technologies.

For a brochure and registration form, write the Minnesota Energy Agency, 740 American Center Building, 160 E. Kellogg Blvd., St. Paul, MN 55101 or phone 612-296-6891.

APC repairs necessitate recall of 1.5 million cars

More than 1.5 million American-made cars and trucks were recalled nationwide for air pollution control repairs between 1972 and the end of 1974, according to Stanley W. Legro, EPA assistant administrator for enforcement. Figures for 1975 are now being compiled by the Agency.

Said Legro, "Roughly two out of three owners of the defective vehicles responded to the recall notices with a year and a half, a rate that compares favorably to safety-related recall programs."

According to data supplied

EPA by General Motors, Ford, Chrysler and American Motors, a total of 50 recall campaigns were initiated before the end of 1974, the majority carried on voluntarily. Only four of the 50 recalls were EPA-ordered.

Most of the campaigns involved the repair of errors made by manufacturers at the assembly line and discovered later (wrong parts or faulty installation.) Roughly two-thirds of the total 1.5 million recalled vehicles were the objects of only three campaigns.

Indiana may offer minor in environmental studies

A teaching minor in conservation and environmental studies is one of new certification recommendations proposed by the Indiana Commission on Teacher Training and Licensing.

According to Dr. Clyde W. Hibbs, chairman of the department of natural resources at Ball State University in Muncie, the recommendation proposes that a holder of the minor be eligible to teach environmental science at the basic preparation level of the license.

Under the proposal, candidates would spend 24 semester hours studying subjects such as: introduction to natural resources; biological sciences; earth sciences; economics, political sciences and sociology, including a study of population and demography; and special resource areas—including basic resource areas, outdoor recreation and resource management.

CEQ report calls for national air quality index

Terming existing methods for reporting air quality in the United

States "confusing and scientifically inconsistent," the President's Council on Environmental Quality has formed a task force to develop a recommended air pollution index for use by state and local governments.

A report entitled "Air Pollution Indices: A Compendium and Assessment of Indices Used in the United States and Canada," describes a mishmash of air quality reporting methods in use today. At least 15 basically different kinds of indices are employed, and few of them seem to provide truly meaningful information to the public, the report continued.

According to CEQ chairman Russell W. Peterson, the study (conducted in cooperation with EPA) provides the first systematic analysis of the short-term indices that are used routinely by local agencies and news media to provide the public with simple guides for assessing the severity of local air pollution.

It also revealed that of 55 metropolitan air pollution control agencies surveyed in the United States, 33 routinely used some form of short-term air quality index. But the study also found that nearly all of the indices had different mathematical formulations and different meanings to the public.

Striking differences were also discovered in the way cities calculate their indices, the number of pollutants they include, and the manner in which they report their indices to the public, the survey found.

The survey that prompted the formation of the task force included a review of current literature on air pollution indices, telephone discussions with persons from the 55 agencies and a case study of a three-state region where an attempt is being made to develop a uniform pollution index.

Single copies of the study may

be obtained from the Public Information Office, Council on Environmental Quality, 722 Jackson Place, N.W., Washington, D.C. 20006.

Special board to monitor Michigan, Ontario air

Michigan and Ontario air pollution will be monitored and recommendations for its abatement will be made by a special international board of air pollution experts appointed by the International Joint Commission.

The commission was asked by the government of Canada and the United States to investigate on a

continuing basis the state and air quality in the Detroit-Windsor and Port Huron-Sarnia areas, and to monitor measures to improve air quality undertaken pursuant to the 1974 Michigan-Ontario Memorandum of Understanding.

The six-member board (three Canadians and three Americans) was formed as a regional air pollution monitoring and investigative arm of the commission.

EPA, AMC officials in tentative agreement

Officials of EPA and American Motors Corp. (AMC) recently

reached a tentative agreement to clean up air pollution at the firm's Kenosha, Wis., plants.

According to Region V enforcement attorney Edward Rodzinak, the agreement stipulates that AMC would clean up air pollution at its main plant in Kenosha by July 31, 1977, and at its facility fronting on Lake Michigan by Dec. 31 of this year.

The problems are caused by the release of hydrocarbons from solvents used in rust-proofing and undercoating the auto bodies. AMC is the state's largest employer, with about 18,000 workers.

News for Government

LOCAL REPORT

Following is a list of communities, jurisdictions, etc., in Region V that received grants from EPA between Feb. 14, 1976 and Mar. 19, 1976. Most of the grants were for sewage treatment projects of one kind or another.

ILLINOIS

Addison, 2/27, \$136,200; Barrington, 2/27, \$216,975; Bloomington and Normal Sanitary District, 2/27, \$9,896,250; Buckley, 2/26, \$12,075; Central Sanitary District, 3/3, \$30,600; Chicago Metropolitan Sanitary District, 2/27, \$168,900; Decatur Sanitary District, 2/25, \$217,875; Deland, 2/24, \$1,200; Downs, 2/24, \$6,150; Dunlap, 2/27, \$7,875; Elgin Sanitary District, 2/19, \$21,038.

Farmersville, 2/18, \$8,550; Harrisburg, 2/27, \$19,575; Illinois Dept. of Conservation, 3/3, \$220,300; Kankakee, 2/27, \$494,625; Loami, 3/10, \$3,600; Louisville, 3/8, \$5,325; Macomb, 2/19, \$47,325; Mason City, 2/20, \$16,425; Millford, 2/19, \$24,600; Millstadt, 3/11, \$3,030; Metropolitan Sanitary District of Chicago, 3/10, \$4,955,625; Naperville, 2/27, \$526,875.

Patoka, 2/27, \$9,225; Raleigh, 2/26, \$10,125; Ransom, 2/17, \$4,425; Rockford Sanitary District, 2/24, \$398,700; Rutland, 2/26, \$7,125; St. Clair County, 2/23, \$78,525; Tuscola, 2/27, \$129,825; Vienna, 2/24, \$152; West Chicago, 2/24, \$151,200; Westfield, 2/17, \$15,000; Wheaton Sanitary District, 2/23, \$850,350.

INDIANA

Anderson Township Regional Sanitary District, 2/27, \$6,750; Bloomington, 2/27, \$18,375; Bluffton, 2/27, \$96,625; Brook, 2/27, \$13,275; Columbia City, 2/27, \$30,675; Converse, 2/17, \$38,025; Crown Point, 2/26, \$3,747,300; Dayton, 2/27, \$11,700; De Motiee, 2/27,

\$2,143,500; Dillsboro, 2/26, \$18,450; Dyer, 2/27, \$23,175; Earl Park, 2/27, \$10,500.

Evansville Air Pollution Control, 2/24, \$39,467; Goshen, 2/23, \$17,196; Highland Sanitary District, 2/27, \$78,000; Indiana State Board of Health, 2/25, \$30,000; Jackson County Sanitary District, 2/24, \$421; Lebanon, 2/27, \$170,550; Lynn, 2/20, \$19,050; Michigan City Sanitary District, 2/27, \$111,825; Monroe City, 2/27, \$19,350; Muncie Sanitary District, 2/27, \$83,600.

New Point, 2/27, \$6,150; Sharpsville, 2/27, \$5,625; South Central Fayette Regional Sanitary District, 2/26, \$13,125; Wakarusa, 2/27, \$11,925; Waveland, 3/9, \$6,675.

MICHIGAN

Allegan, 2/27, \$4,533,375; Alpena County Dept. of Public Works, 2/26, \$54,000; Bad Axe, 2/27, \$11,250; Berrien County Dept. of Public Works, 2/27, \$73,075; Big Rapids, 2/18, \$89,550; Cadillac, 2/27, \$162,600; Calhoun County Dept. of Public Works, 2/27, \$350,325; Colon, 2/27, \$4,950; Corunna, 2/26, \$35,700; Delhi Charter, 2/27, \$193,200; Detroit, 2/27, \$6,910,050.

Gallen, 2/27, \$9,750; Genesee County, 2/17, \$1,023,375; Gladwin, 3/10, \$885,075; Grand Rapids, 2/24, \$509,850; Harbor Beach, 2/25, \$5,250; Hillsdale, 2/25, \$50,325; Homer, 2/23, \$51,750; Huron County Bureau of Public Works, 2/19, \$45,400; Kingsley, 2/24, \$3,600; Leland Township, 2/27, \$15,000; Lenawee County Drainage Commission, 2/25, \$66,975; Marlette, 2/27, \$28,575.

Meyer Township, 2/26, \$6,750; Muskegon County

Bureau of Public Works, 2/27, \$278,025; Muskegon County Health Dept., 2/20, \$14,711; Oakland County Dept. of Public Works, 2/26, \$401,250; Otsego County Dept. of Public Works, 2/26, \$43,500; Pontiac, 3/10, \$519,750; Port Huron, 3/2, \$779,090; Richmond Township, 2/27, \$4,600; Saginaw County Bureau of Public Works, 2/24, \$40,000.

Sault Ste. Marie, 2/27, \$37,500; Sheridan Township, 2/27, \$45,750; Springvale / Bear Creek Sanitary District, 2/23, \$105,674; St. Clair County Dept. of Public Works, 2/18, \$3,750; Washtenaw County Dept. of Public Works, 2/17, \$16,500; West Iron County Sewer Authority, 2/25, \$40,500.

MINNESOTA

Alexandria Lake Area Sanitary District, 2/27, \$10,746,000; Big Lake, 2/25, \$36,000; Eden Valley / Kimball / Watkins, 2/24, \$31,725; Gaylord, 2/24, \$40,275; Green Lake Sanitary District, \$41,625; Houston, 2/20, \$3,345; Kiester, 2/20, \$3,601; Lakeview Township, 2/26, \$14,550; University of Minnesota, 2/26, \$32,000; Northfield, 2/25, \$78,825; Owatonna, 3/10, \$142,275; Sacred Heart, 2/25, \$4,375.

OHIO

Arlington, 2/27, \$740,650; Baltic, 2/27, \$54,225; Brewster, 2/23, \$24,750; Broadview Heights, 2/26, \$55,050; Butler County Board of Commissioners, 3/3, \$9,873,375; Caledonia, 2/17, \$250; Canton, 2/27, \$218,250; Carrollton, 2/24, \$103,000; Clark County Board of Commissioners, 2/25, \$4,975; Cleveland Regional Sanitary District, 2/26, \$423,750.

Delta, 2/26, \$41,550; Edgerton, 2/20, \$101,775; Florida,

2/24, \$7,875; Fort Loramie, 2/27, \$86,400; Geauga County Board of Commissioners, 3/12, \$352,575; Hamilton County Board of Commissioners, 2/23, \$209,700; Helgate, 2/27, \$1,593,875; Kingston, 2/27, \$17,100; Lakewood, 2/24, \$307,500; Liberty Center, 2/26, \$2,125,425; Lorain, 3/16, \$262,225.

Miami Conservancy District, 2/27, \$2,254,725; Mount Vernon, 3/4, \$38,700; North Ohio Valley Air Authority, 2/26, \$136,500; Ohio Dept. of Agriculture, 3/10, \$99,939; Piqua, 2/26, \$71,775; Pleasantville, 2/27, \$81,375; Toledo, 3/11, \$152,050; Wood County Board of Commissioners, 2/26, \$154,200.

WISCONSIN

Cedar Grove, 2/27, \$24,450; Crandon, 2/18, \$17,625; Denmark, 3/5, \$34,800; Douglas County Soil & Water, 3/12, \$445,000; Forestville Sanitary District No. 1, 3/4, \$1,875; Holland Sanitary District, 2/17, \$197,400; Kelly Lake Sanitary District No. 1, 3/1, \$4,081; Lake Pewaukee Sanitary District, 2/18, \$34,800; Lena, 3/9, \$12,150; Mellen, 2/18, \$17,475.

Madison Metropolitan Sanitary District, 3/9, \$36,750; Milwaukee County Metropolitan Sanitary District, 2/24, \$68,175; Montreal, 2/27, \$71,025; Mount Horeb, 3/5, \$38,932; Northern Moraine Utility Commission, 3/12, \$55,875; Pittsville, 2/27, \$9,900; Racine, 3/9, \$102,450; Spring Green, 2/17, \$18,750; Sun Prairie, 2/27, \$37,575; Tomah, 3/8, \$141,300; Walworth, 2/18, \$17,025; Washburn, 3/5, \$10,077; Whitewater, 2/25, \$84,400; Wisconsin Dept. of Agriculture, 3/10, \$84,829; University of Wisconsin, 2/26, \$4,828.

FEDERAL REGISTER

FEBRUARY 17

Notices

Pesticide programs:

Data requirements

Pesticide registration:

Applications (2 documents)

FEBRUARY 18

Notices

Air pollution; standards of performance for new stationary sources:

Municipal sewage sludge incinerators

Air quality standards; ambient monitor applications:

Bendix Corp

Pesticide registration:

Applications

Pesticide applicator certification; State plans:

Washington

Pesticides, specific exemptions and experimental use permits:

Elanco Products Co

Stack height increase guideline

FEBRUARY 19

Rules

Air quality implementation plans:

New sources and modifications, review

Air quality implementation plans; various states, etc.:

Texas

Proposed Rules

Water pollution; effluent guidelines for certain point source categories:

Pulp, paper and paperboard

Notices

Experimental use permits; issuance:

Chevron Chemical Co. (2 documents)

CIBA-Geigy Corp

Velsicol Chemical Co. et al hearing on consolidated hep-

tachlor/chlordane

Meetings:

National Air Pollution Control Techniques Advisory Committee

Pesticide registration; applications (2 documents)

FEBRUARY 20

Rules

Air quality implementation plans; various States, etc.:

Oregon (2 documents)

Notices

Air pollutants hazardous; National emission standards:

Oregon; authority delegation

Pesticide applicator certification; State plans:

Delaware

FEBRUARY 23

Proposed Rules

Air pollution control, new motor vehicles and engines:

Light duty vehicles and trucks

Air quality implementation plans; various States, etc.:

New Jersey

Water pollution control:

Discharge elimination system, National; agricultural activities

Notices

Energy related authority; progress and impact report

Meeting:

State-Federal Water Programs Advisory Committee

Pesticides, specific exemptions and experimental use permits:

Wyoming Department of Agriculture

FEBRUARY 24

Rules

Air quality implementation plans; various states:

New Mexico

Oregon

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Perfluidone

Proposed Rules

State implementation plans:

Iowa

Nebraska

Notices

Pesticide registration:

Applications (2 documents)

FEBRUARY 25

Notices

Environmental impact statements; agency comments; availability

Pesticide registration; approval of requests:

Florida, Kansas, Maryland and Pennsylvania

FEBRUARY 26

Rules

Air pollution, hazardous, National emission standards:

Commonwealth of Virginia; authority delegation

Air pollution, standards of performance for new stationary sources:

Commonwealth of Virginia; authority delegation

Primary copper, zinc, and lead smelters; correction

Noise emission standards:

Portable air compressors; correction

Proposed Rules

Air pollution control, new motor vehicles and engines:

Revised light duty truck regulations for 1978 and later model years; correction

Notices

Air pollution; standards of performance for new stationary sources:

Virginia; authority delegation

Meeting:

National Air Quality Criteria Advisory Committee

Pesticide chemicals, etc.; petitions:

Shell Chemical Co. et al

Pesticides, specific exemption and experimental use permits:

Interior Department; sodium cyanide in M-44 device

Tennessee Valley Authority; 2,4-D to control Eurasian watermilfoil

FEBRUARY 27

Notices

Air pollution; ambient air monitoring reference and equivalent methods (2 documents)

Pesticide registration:

Applications

Pesticides, specific exemptions and experimental use permits:

American Hoechst Corp

Stauffer Chemical Co

Pesticides; temporary tolerances:

Carbofuran

MARCH 1

Rules

Air quality implementation plans; various States, etc.:

Maryland

Oregon

Pesticides chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Paraformaldehyde

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

2-Methyl-4-chlorophenoxyacetic acid

Notices

Meetings:

State Federal Water Programs Advisory Committee

Pesticide chemicals; petitions:

Union Carbide Corp

Pesticide registration:

Applications

Picloram

MARCH 2

Rules

Air quality implementation plans:

Clarification of contents

Pesticide chemical in or on raw agricultural commodities; tolerances and exemptions:

Asulam and 3,5-Dimethyl-4-(methylthio) phenyl methylcarbamate

MARCH 3

Notices

Environmental impact statements; availability

MARCH 4

Rules

Air quality implementation Plans:

Gasoline vapor control

Construction of treatment works; subagreements under grants

Pesticide chemicals in or on raw commodities; tolerances and exemptions, etc.:

Oryzalin

Proposed Rules

Air quality implementation plans; various States:

Florida

West Virginia

Notices

Pesticide chemicals, etc.; petitions:

American Cyanamid Co

Pesticide registration:

Applications

MARCH 5

Rules

Air quality implementation plans; various States, etc.:

SS Texas

MARCH 8

Rules

Air pollution control; motor vehicles and motor vehicle engines:

High altitude vehicle sales

Notices

Air pollution control, new motor vehicles and engines:

Federal certification, test results for 1976 model year

Meetings:

Administrator's Pesticide Policy Advisory Committee;

Strategy Subcommittee

Water pollution prevention and control; addition to list of categories of sources

MARCH 9

Rules

Air quality implementation plans; various States, etc.:

South Carolina

Fuel and fuel additives; unleaded gasoline:

Administrative procedures

Water pollution; effluent guidelines for certain point source categories:

Explosives manufacturing

Proposed Rules

Air quality implementation plans; various States, etc.:

New Hampshire

Wisconsin

Water pollution; effluent guidelines for certain point source categories:

Explosive manufacturing

MARCH 10

Rules

Air quality implementation plans:

Boston

Notices

Pesticide application certification; State plans:

Commonwealth of Puerto Rico

Michigan and Wisconsin

Pesticides chemicals, etc.; petitions:

CIBA-Geigy Corp.; correction

Penwalt Corp

3M Co

Uniroyal Chemical

Pesticide registration:

Application

MARCH 11

Notices

Pesticide chemicals, etc.; petitions:

Fisons Corp

MARCH 12

Rules

Pesticide chemicals in or on raw agricultural commodities, tolerances and exemptions, etc.:

2-(Dimethylamino) - 5,6 - dimethyl - 4 - pyrimidinyl dimethylcarbamate

Notices

Background report of guidance for diagnostic X-ray studies in Federal health care facilities; issuance and availability

Food additive tolerance petitions:

American Cyanamide Co. Inc. et al

Dow Chemical Corp., et al

Pesticide registration; applications (3 documents)

Pesticides, specific exemptions and experimental use permits:

Amchem Products, Inc

American Cyanamide Co

Bayvet Corp

Diamond Shamrock Corp

FMC Corp. (2 documents)

Texas A & M University

Union Carbide Corp

Velsicol Chemical Corp

MARCH 15

Rules

Cost for treating mineral mining and coal mine discharges; (2 documents)

MARCH 16

Notices

Air pollution; ambient air monitoring reference and equivalent methods; correction

MARCH 17

Rules

Air pollution; ambient air monitoring reference and equivalent methods

Proposed Rules

Air pollution:

Air monitoring reference and equivalent methods, methods for nitrogen dioxide

Measurement principle and calibration procedure for the measurement of nitrogen dioxide in the atmosphere

MARCH 18

Rules

Pesticide chemicals, tolerances and exemptions, etc.; benomyl

Water pollution control:

National Pollutant Discharge Elimination System (2 documents)

Notices

Food additive petitions:

Monsanto Agricultural Products Co

Pesticide chemicals, etc.; petitions

Zoecon Corp

Pesticide registration:

Pesticide products containing active ingredients; applications; correction

Pesticides, specific exemptions and experimental use permits:

Oregon State Department of Agriculture; benomyl on wheat

Stauffer Chemical Co.; S-ethyl diisobutylthiocarbamate on corn

*U.S. Government Printing Office: 1976 - 650-516 P.O.: NO. 7/Regional V-1.

ENVIRONMENT MIDWEST
ENVIRONMENTAL PROTECTION AGENCY

Office of Public Affairs

230 South Dearborn

Chicago, Illinois 60604

THIRD CLASS

POSTAGE AND FEES PAID

ENVIRONMENTAL PROTECTION AGENCY

PS 125



Return this sheet if you do NOT wish to receive this material or if a change of address is needed (include change, including zip code).



Environment Midwest

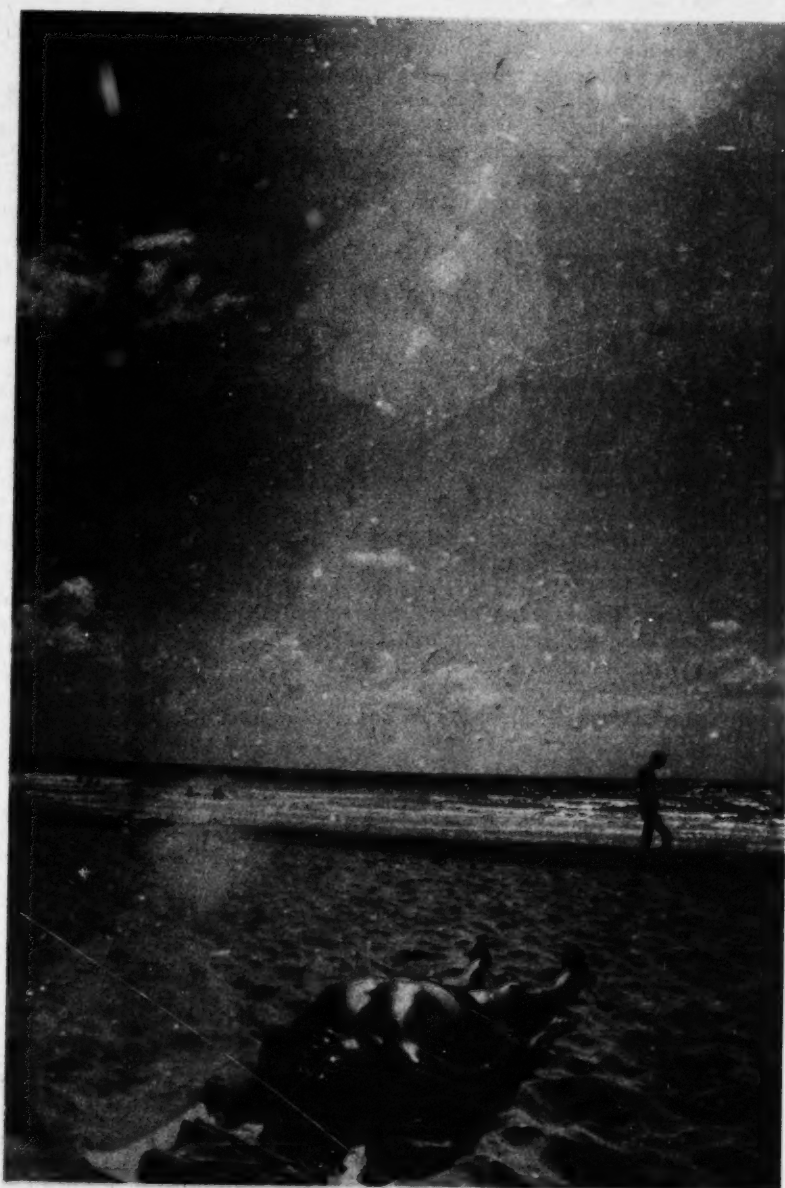
REGION V
UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY

MAY 1976

**Air in Gary
a whole lot cleaner
Page 3**

**Lake Superior meeting
warms up a bit
Page 5**

**Optimistic outlook for
Lake Michigan beaches
Page 8**



Here's some good news

One of the most heartening reports to Congress in a long time was made recently by EPA headquarters in Washington, reporting significant gains in the battle to clean up the nation's water. The report is EPA's 1975 National Water Quality Inventory report, based on information from the Agency's own studies and from reports provided by 47 of the 50 states and six other jurisdictions.

The assessments describe current water quality conditions, the effects of existing water pollution control programs, and the expected costs and benefits of current and proposed future programs.

As you may recall, I stated in this space last month that one of my two special concerns as regional administrator was to insure the Great Lakes continue to receive recognition as a national resource and as a national pollution cleanup priority. So I am happy to report most of the states able to describe water quality trends reported conditions have improved in many waterways such as the Detroit River and Lake Ontario, to mention a couple right here in Region V.

Many states point to reductions in oxygen-demanding loads, coliform bacteria, and, in a few instances, harmful chemicals. Reducing oxygen-demanding loads, of course, allows higher levels of dissolved oxygen, necessary to support fish, while reducing bacteria counts to below a certain level provides water that is safe for human contact recreation.

And since Region V encompasses far and away more fresh water than any other Region, it is especially encouraging to note that measurable abatement of pollution has been achieved not only through wastewater treatment processes, but also by means of other controls, such as the curbs placed on pesticides. For example, concentrations of DDT in the tissues of fish caught in Lake Michigan have declined dramatically since strict controls were placed on that chemical.

However, we must also note that the picture isn't 100 per cent bright. Despite significant improvements noted in the quality of the country's waters, states and other jurisdictions report they are still confronted with many severe pollution problems: excess bacteria and low dissolved oxygen



GEORGE R. ALEXANDER JR.

levels; the presence of toxic substances including heavy metals, industrial chemicals and pesticides; and high concentrations of nutrients such as phosphorous and nitrogen.

The inventory also points out that water pollution problems vary with geographical location and with land use. Here in Region V (and also in the northeastern states) our major problems are low dissolved oxygen levels, high nutrient concentrations, excess coliform bacteria, and toxic chemical concentrations. The latter are caused primarily by municipal and industrial sources, including urban runoff.

By contrast, the report says central, southern and western states cite erosion from agricultural areas as a major source of their pollution, a problem of relatively minor stature here in Region V. Those other areas also face the problem of irrigation return flows carrying large quantities of salt from agricultural lands.

Again, the problem isn't as severe in Region V, but mining areas across the country report pollution problems arising from acid mine drainage. The metals most frequently mentioned in the report are mercury, cadmium, manganese, lead and iron.

But even with all these headaches, the states generally feel that significant headway is being made in controlling water pollution. Many of the dirtiest rivers are getting cleaner, and steps are being taken to make sure those areas which now have good water quality will be able to maintain those conditions.

But while the report indicates we've come a long way, I feel there is still much progress to make, especially in this Region. That's why I intend to keep up my support for ongoing efforts to make the Region's waters cleaner yet.

By the way, if you're interested in a copy of the Water Quality Inventory, it is available from EPA's Office of Water Programs (Water Quality Analysis Branch), Washington, D.C. 20460.

Environment Midwest is a monthly newsletter published by the Public Affairs Office, Region V EPA, 230 S. Dearborn, Chicago, Ill. 60604.

George R. Alexander, Jr. Administrator
Valdas Adamkus Deputy Administrator
Frank Corrado Public Affairs Director
Matt Racki Editor



Back in the "bad old days," scenes like this steady stream of pollutants were a common sight in Gary.

Attention Ripley—please visit Gary

Believe it or not, the air in Gary, Ind., is cleaner now than it probably ever has been. People who have lived there all or most of their lives probably haven't noticed the change, since it's been so gradual, but for someone who came back in 1976 after 15 or 20 years, it's sort of like the difference between night and day.

In 1965, for example, assorted crud going by the name particulate matter totaled 170 micrograms per cubic meter of Gary's air. By 1970 the figure had dropped to 101 and by the end of 1975 to 76.8. And it is hardly a coincidence that in 1965, United States Steel was operating 57 open hearth furnaces; none at the outset of 1976.

But this isn't another story of the "cleanup" of U.S. Steel; that's been done before. The problem now is sort of a bit-sweet one — convincing those who care that Gary's air is much, much cleaner than it was a decade or more ago.

Says Dennis McGuire, acting chief of the Gary Air Pollution Control Division, "Although we also test for sulphur oxides and nitrogen oxides in the city's air, the amount we find is practically nil. Gary's problem over the

years, the 'red skies at morning' so to speak, has been from the particulate matter emitted by the mills.

"A lot of people still feel the city is just loaded with these types of gaseous pollutants, but they've never been a problem."

Although Gary isn't quite down to the 75 micrograms per cubic meter standard set by the Clean Air Act, the 76.8 geometric mean of its nine testing stations is pretty close. The 75 standard was due to be met in mid-1975 so Gary is about a year late, but if there ever was a case of 'better late than never,' this is it.

McGuire added, "I never thought back in 1970 that we would be anywhere near as close to the 75 standard as we are today."

He added that four or five of the nine measuring stations that are well below the 75 primary standard, but that one, in the heart of the downtown area and just a few blocks from the huge USS Gary Works, is still well in excess of the standard.

"That one comes in at about 90-100 micrograms, so that one station seems to be a thorn in our side right now. However, the measurements at that station

have really decreased over the years, too, possibly even more drastically than they've dropped at the other eight stations," McGuire said.

Of all the actions, counteractions and general hassling that have gone on between EPA and U.S. Steel the past few years, perhaps none has been as controversial as the closure about six months ago of four coke batteries at the Gary Works. The skies didn't improve 100 per cent overnight, but McGuire is confident a vast difference in Gary's air quality will be readily apparent this summer.

"After all the controversy, I think of lot of people in Gary expected to wake up the morning after the batteries were closed and find the air as pure around here as it was a thousand years ago. But things just don't happen that fast.

"There are so many variables you have to consider — the weather, including wind velocity and direction — that it really takes at least a good six months before you can accurately determine how much of an improvement there has been.

"But the indications are," continued McGuire, "that we're in

pretty good shape; we might be well below the primary standard by this summer."

Part of the problem (if indeed it is) in convincing Garyites and visitors that the air quality had drastically improved in the past decade is that the change has been so gradual.

As McGuire put it, "I would

McGuire should have been a fortune teller. When quizzed about that exact question, only one Garyite said that, well, things did seem better, but not all that much.

The rest — a department store sales clerk, a filling station manager, a legal secretary, a cafe manager and a sanitation worker

"If Gary's air quality reverts to the way it was 10 or 15 years ago, I wouldn't start packing."

guess that if you interviewed a dozen people right in the streets of downtown Gary, not one would tell you he or she has noticed much of an improvement in the air over the past decade. That's because the change has been so gradual it's hard to notice. But believe me, there has been a vast improvement."

— said they really hadn't been paying that much attention over the years.

Theirs was pretty much a "That's nice, but I don't plan on getting too excited about it" attitude. An ironic attitude in a way; everyone seemed to be saying they sort of take pure, clean air for granted.

One "man in the street" did

expound to the extent of saying, "I don't mean to sound as if I don't appreciate the fact the air around here is cleaner, but the way I see it, there isn't much I as an individual can do about it anyway. And if I can't do anything about it one way or another, I don't see much point in getting that concerned about it.

"The skies do seem a lot clearer much more frequently than they did back in the 60s, and I guess I should be grateful for that. But if the air quality tomorrow reverted to the way it was 10 or 15 years ago, I don't think I would start planning to pack up and leave Gary. I've lived here most of my life and it's home, come blue skies or red."

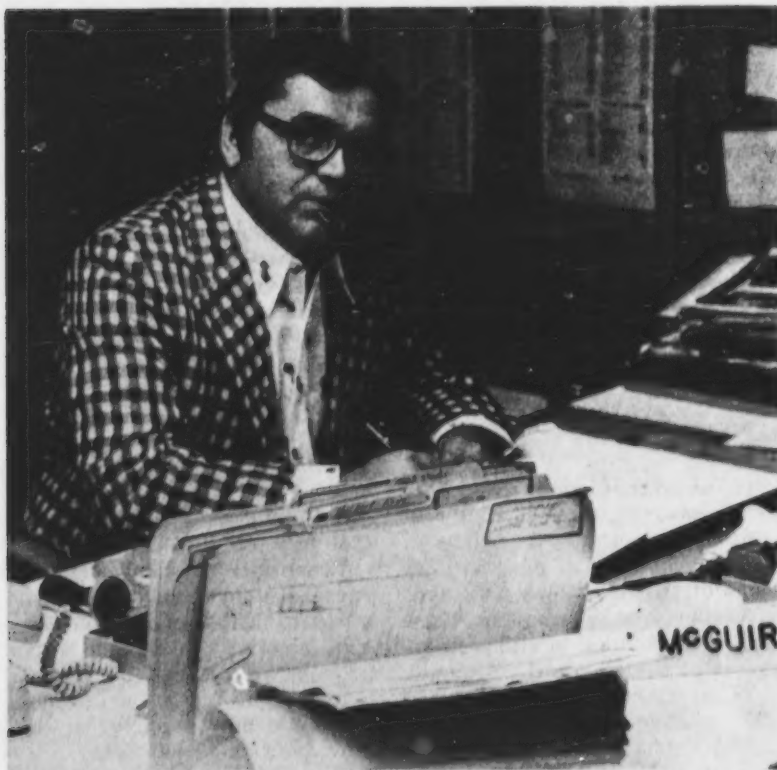
Pretty much in agreement with what the citizen said was Elaine Kaplan, a Gary environmentalist who also teaches a course called Community-wide Environmental Education Program at the Calumet campus of Purdue University.

"The only place I might disagree with what anybody has said is that I feel the improvement in Gary's air quality has been quite dramatic, especially since the U.S. Steel open hearth furnaces and coke ovens have been closed.

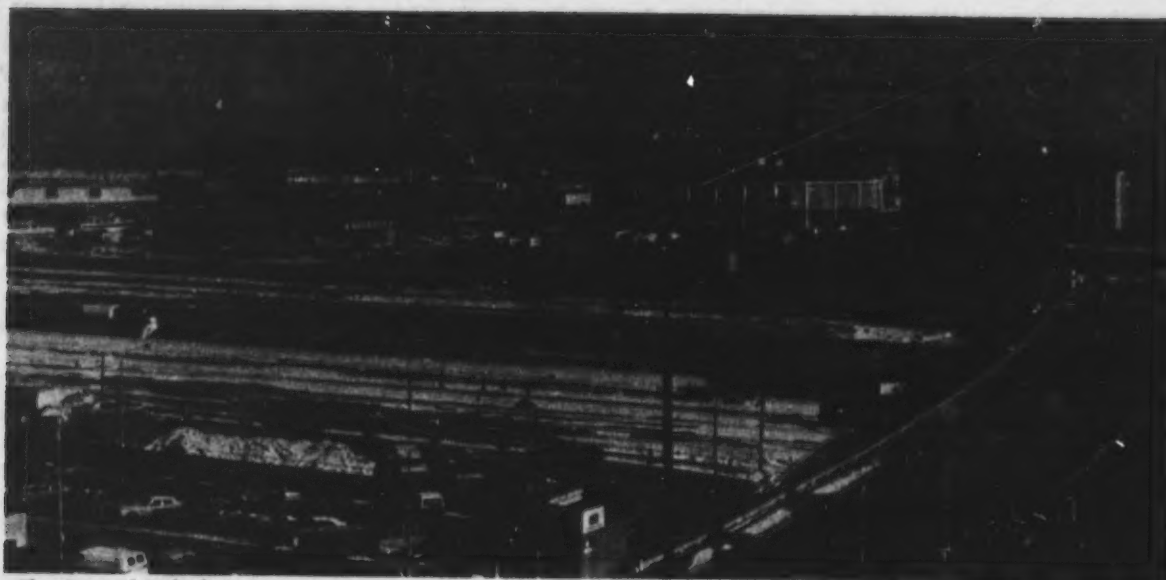
"I think it's obvious that has gone a very long way towards contributing to the betterment of the city's air. What we should strive for now is to try and keep citizens vigilant to avoid any slipping back into old habits, as well as making it easier for them to get statistics from government and industry on the costs of pollution you can't measure in dollars and cents."

She elaborated to the effect that, "What I'm talking about in this instance are the possible health hazards from environmental pollution that need a lot more exploration.

"It's all well and good for the government and private institutions to keep statistics on various health/environmental problems, but I think as many of them as possible should be made available to the public for their study, too."



McGuire thinks Gary air quality, while good, could still improve.



The Port of Duluth-Superior can expect more Lake Superior transshipments in the future, a panelist said.

Things get a little hot at Lake Superior meeting

By Matt Racki

[Last month, Environment Midwest detailed the first day of "Lake Superior — A Resource Imperiled," held recently in Duluth. Following the keynote address by former Secretary of the Interior Stewart Udall, the audience heard papers by Dr. Donald I. Mount, director of EPA's Environmental Research Laboratory in Duluth, and Harvey H. Clare, head of the Environmental Protection Division of Imperial Oil Co., Toronto.]

This concluding part deals with papers presented by Dr. Eric C. Sievwright, a Toronto economist, and A. Dan Tarlock, professor of law at the Indiana Law School. It also includes some of the audience reaction to both papers as well as

summation remarks by several panelists.]

Session two was devoted to an analysis of the social and economic implications of increased transportation of hazardous substances on Lake Superior and was highlighted by the presentation of "Strategic Superior" by Dr. Eric C. Sievwright.

An economist and senior consultant with E. C. Sievwright Associates in Toronto, he discussed the background of Lake Superior trade and made projections showing cargo moved on the lakes will increase from an estimated 125 million tons in 1975 to 163 million tons by 1980 and 211 million tons by 1985.

By cost comparisons, he vir-

tually eliminated the probability of using unit trains to move the large amounts of bulk cargo from the western end of Lake Superior to lower lake ports.

Dr. Sievwright emphasized that in relating future lake traffic to potential environmental hazards he did not concentrate on cargoes usually labeled as potential hazards (including petroleum products), but instead focused on all bulk movement commodities which provide the weight of freight, and consequently, tonnage used.

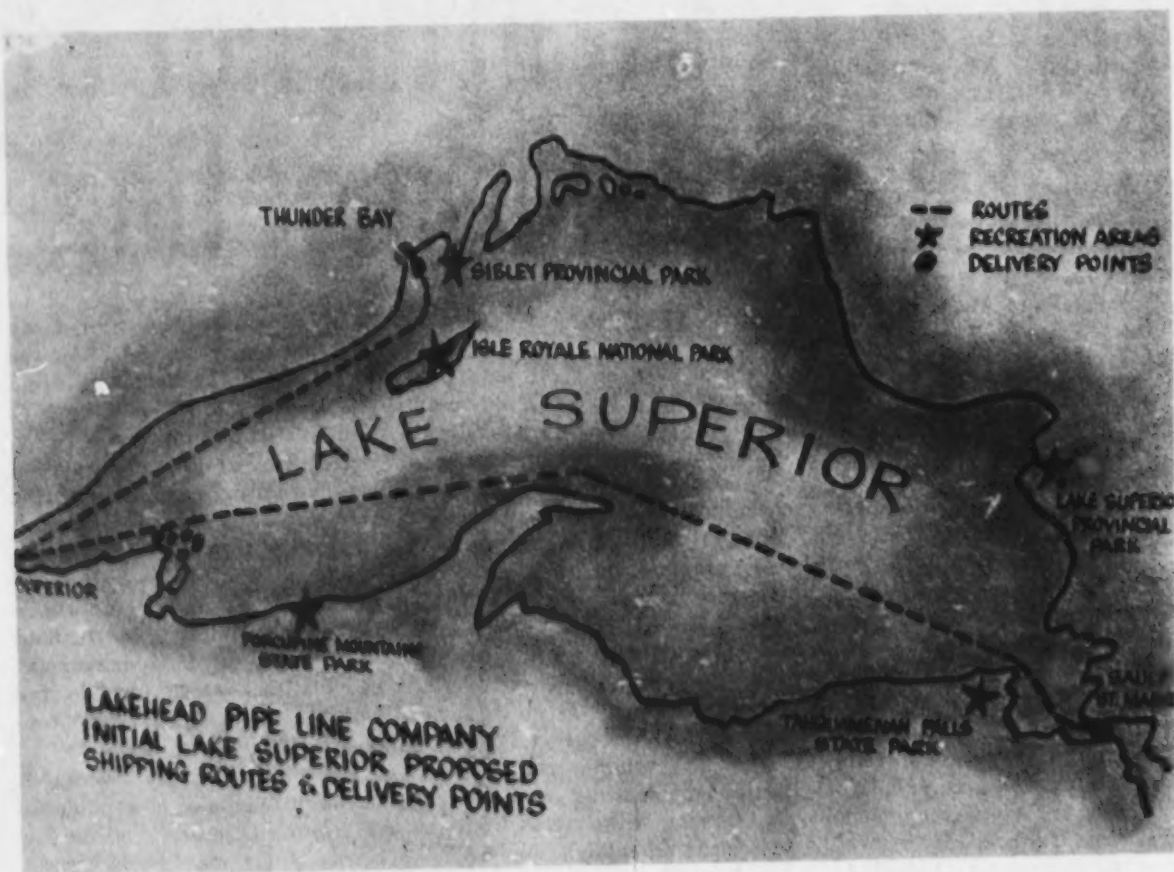
He said, "Every oil-fueled vessel on the lake is a potential environmental hazard and the fuel carried in any one of these vessels, regardless of the cargo, has an environmental meaning."

The point to remember, his

President of the Save Lake Superior Association, Mrs. Lehto sharply criticized Dr. Sievwright's paper as "inadequate." She said, "Clearly there is reason to question the economic wisdom of increasing transportation of petroleum products or other hazardous materials on Lake

After another four-member panel discussion, other participants from earlier in the conference returned to answer

Highlighting that session was the paper of A. Dan Tarlock, professor of law at the Indiana



Map at conference room showed attendees Lakehead Pipeline Company's proposed shipping routes.

Law School, entitled, "Regulations of Transportation of Oil and Other Hazardous Substances: An Overview."

Tarlock stressed that to understand what legal strategy a state should adopt to minimize the consequences of oil and other hazardous substance spills, it is necessary to comprehend present regulatory jurisdiction between international bodies, the federal government, and the states.

Said Tarlock, "It is the position of the United States that unilateral regulation of shipping activities on waters under its jurisdiction should be undertaken only after international efforts to achieve uniform worldwide regulations fail."

He also told the conference that at present, the U.S. spill prevention policy is centered on recovering the costs of spills from ships and shore facilities, and regulating the design of supertankers.

"The federal government does not yet have a port location and design policy, although one is evolving," Tarlock added.

States regulate oil spills by two primary methods, he said. In all states (including Minnesota, Michigan and Wisconsin) the discharge of oil into waters under the aegis of the state violates state water pollution control statutes.

According to Tarlock, some states have gone even further and passed legislation to control the operation of shore facilities and recover damages sustained by the state and private parties as the result of a spill.

However, he added, state spill laws are subject to attack on the grounds that the federal government has preempted the area.

"This issue was before the U. S. Supreme Court in a test case under Florida legislation. *Askew vs. American Waterways Operators* holds that, in general, state legislation is not preempted,

but substantial preemption problems remain, nevertheless."

He closed his paper with the statement that although states are presently free (with undefined limits) to enact spill prevention and damage recovery legislation, that situation may change.

Congress is considering legislation to create a spill damage recovery fund upon which injured governments and the states could draw. Legislation proposed by the administration, according to Tarlock, would preempt state legislation, while other proposed versions of the fund would not.

The closing session later in the day was mostly a summation/recommendation affair

conducted by Peter Gove of the MPCA. He remarked that, "At first, we were a bit edgy as to how the conference might turn out, since it was a rather big undertaking for a relatively small agency like ours.

"There were those who felt originally that the program was loaded with environmentalists, and there were others who felt there was too much commercial representation. There were even those who had some trouble with the title of the conference, one person suggesting that perhaps there should be a question mark after the word 'imperiled.' (A reference to Harvey Clare's paper the day before). Still others thought it shouldn't have been an international conference at all."

But all that notwithstanding, Gove continued, the MPCA was well pleased with the way things turned out.

After reviewing the three papers of Messrs. Mount, Sievwright and Tarlock, Gove reminded the audience that, "We've heard a lot about those 'other' toxic substances being transported across Lake Superior and that we really don't know what they are.

"Comments were made about ship manifests being available to find out what those toxic cargoes are and I think that's something that ought to be looked into."

Gove also reminded the conferees that, throughout the sessions, the question kept cropping up as to what was the true cost of cleanup programs run by the Coast Guard, the Army Corps of Engineers and other agencies.

"Someone made the point," he said, "that we're really not looking at the total picture in this regard, namely at how high the cost might be in terms of 'unmeasurable' factors such as denial of recreation facilities, etc. along the lakeshore to citizens."

He also summarized the

Ohio is still part of EPA Region V

Due to an oversight, the State of Ohio was omitted from last month's story in Environment Midwest dealing with certification of private pesticide applicators.

Enabling legislation unanimously passed the senate April 20 and is awaiting Gov. James Rhodes' signature. According to Harold Porter, chief of the Division of Plant Industry, about 3,000 private applicators are currently licensed (not the same as certified) with another 1,300 scheduled for certification training.

The state has held nearly 20 sessions so far for private applicators. Sessions are divided by "crop," that is, applicators are grouped by session according to the type of crop they raise.

Training is taking place in each of the state's 88 counties and of the approximately 2,000 private applicators who have been tested so far, only four per cent have failed the certification examination, according to Porter.

statement of an earlier panel member that owners of ships transiting the Great Lakes would obey any and all regulations as long as they knew what they were.

"But," Gove said, "that was disputed as just untrue. You only have to look at their record when it comes to following discharge regulations to see that, the man said."

Gove then turned things over to the four-member panel for their summations. The lead-off panelist, Thomas G. Frangos, said, "Some of us who ought to know what's going on regarding transshipment of hazardous substances don't know, and I include myself in that category."

Frangos, of the Wisconsin Department of Natural Resources, added that, "Maybe there is no problem, but can we chance it? I think our biggest challenge, especially when it comes to cleanup regulations and operations, is to get the various bureaucracies involved to put their heads together and see if they can coordinate the answers to some of the problems raised here the past two days."

Another panelist, William G. Turney, chief of the bureau of water management of the Michigan Department of Natural Resources, said that, "One thing I

think we've decided is that shipping per se is not a problem and that oil shipments are the big attention-getters.

"Perhaps we ought to concentrate on intentional discharges. How many of you were aware that Burns Harbor, Ind., is the only facility on the entire Great Lakes where a ship can clean its tanks? That just shouldn't be."

Ian Ramsey of the Ontario Ministry of the Environment summarized by telling the crowd that, "I'm concerned about the possible long-term health effects of oil spills. We should definitely look at the transshipment problem, but to consider it alone at this time seems to me to be a gross oversimplification of the conundrum we face."

He also touched on the idea that close examination of ships' cargo manifests would help keep various officials informed as to just what toxic or hazardous substances are crisscrossing the Great Lakes.

"There are several problems in that," he said. "First of all, what does a trade name on a barrel mean? Absolutely nothing if the manufacturer hasn't listed the components of the product inside."

"But one way to crystallize the needed information is for a

country's federal government to work closely with various other agencies, firms and so forth. For example, we enjoy good relations with the Great Lakes states through our International Joint Commission activities."

Wrapping up the final panel discussion was Chris Timm, Region V director of surveillance and analysis. He told the audience that, "I feel Lake Superior is imperiled. I worry more about the uncontrolled sources of pollution—air, runoff from streams—than I do about controlled sources."

"While U. S. laws regarding spillage and cleanup have good basis in fact, they don't necessarily give us what I would call 'environmental control.' The point is that there is a great lag time between a law's passage and the effects to be gained from it," Timm said.

He added that, "We in EPA, for all practical purposes, depend upon the public to tell us what goals to pursue. In the final analysis it's really the public that sets our priorities."

"But when it comes to protecting Lake Superior or any of the Great Lakes, we may someday have to ban all shipping on those waters. If that's the case, then so be it."

'Old swimmin' hole' forecast great

If you've got swimming, boating, water skiing or other aquatic plans for Lake Michigan this summer, feel free to plunge right in — except in Milwaukee following a moderate rain, and in a very few other places.

Indications are that beaches all along the lakeshore will be in fine shape this summer, although there might be a few "iffy" spots. A recent Environment Midwest informal survey reveals that officials in Wisconsin, Michigan, Illinois and Indiana are generally

optimistic about the water quality of beach areas in their respective states.

Robert Courchaine, chief of the Water Control Division of the Michigan Department of Natural Resources, said that, "Things look pretty good as far as water quality is concerned for all the state beaches."

"We had a problem with algae in the Cladophora area about three or four years ago, but haven't had any complaints about that region since. The other major

beach areas — Warren Dunes, Grand Haven, Muskegon, Ludington, Orchard, Sleeping Bear and Machilimackinac — should be in excellent condition. So all in all, I'd have to say we don't anticipate any problems in Michigan this summer at all," Courchaine added.

Not quiet so optimistic was F. H. Schraufnagel, assistant director of the Bureau of Water Quality of the Wisconsin DNR.

"We expect things to be in ideal shape in such areas as Harrington



Gamboling along Lake Michigan's beaches this summer should present problems in only a very few areas.

A heavy rain in Milwaukee means little activity at the city's beaches.

Beach, Point Beach State Park and Potawatomie, but Milwaukee beaches are still plagued by the same problem that's existed for years," he said.

The problem in Wisconsin's largest city is several-fold, but water quality along Milwaukee's beaches is especially suspect following periods of moderate to heavy rains.

For one thing, the city's sewer system is 40-50 years old. For another, the sewage treatment plant is just not large enough.

"But the biggest headache is that many of the storm and sewer systems use the same pipes. So

every time it rains about half an inch or more, there's an overflow and bypass problem.

"The estimates I've heard say it would cost in the neighborhood of half a billion dollars to replace all the pipes. And the fact most of them are buried 40 or 50 feet under the streets would make the traffic situation horrendous if and when they are ever dug up and replaced," Schraufnagel said.

He added that it has been common practice for several years now for the city to close its beaches for several days after a moderately heavy rain. Exactly how long the beaches remain

closed depends upon the amount of rain that fell.

"It's just understood by Milwaukeeans that you don't go to the beach for awhile after a rain because they aren't going to be open," Schraufnagel added.

Similar problems exist at Kenosha and Racine, he said, but no where near the degree Milwaukee suffers. And given the half-billion price tag of alleviating the city's headache, Schraufnagel doesn't expect much improvement in the near future.

Officials in Illinois are, for the most part, enthusiastic about that

state's numerous beaches. Gene Theios, director of the Division of Environmental Health for the Lake County Health Dept., says all 13 beaches under his agency's jurisdiction will be open this summer.

The LCHD monitors beach waters from the Illinois-Wisconsin state line south to the Cook County line, including facilities in Waukegan, Zion, North Chicago and Highland Park, among others.

According to Theios, his department and the North Shore Sanitary District will be taking water samples every day during the swimming season, checking for levels of total coliform, fecal coliform and coliform streptococci.

He expects all 13 beach areas to be improved over last year, the first time any of them were open in the past five years.

"A lot of the credit for the improved water quality must go to the NSSD," Theios said. "Over the past few years they've completed several major improvement programs that have accounted for a drastic reduction in the bacterial count along the beaches.

"We took readings last year that indicated it was safe to open the beaches for the first time in five years and we had no reports of any problems. All indications are this year will show conditions are better than last, so, barring some unforeseen happening, we expect all the beaches to be in good shape this summer," Theios added.

He also noted that the daily samplings his department will be taking gives it a "cushion" in making sure the water quality stays at desired levels.

Farther south, from the Lake-Cook county line to the northern Chicago city limits, the waters along beaches at Glencoe, Wilmette, Winnetka, Kenilworth and Evanston should be in the best shape in years.

Says Harriet Kennedy, lab director for the Evanston-North Shore Health Dept., "We don't foresee any problems in our area,

except possibly when the wind is from the northeast. That stirs up the bottom of the lake and usually means a somewhat elevated bacteria count. Of course, we have no control over the wind direction, and even when the wind isn't 'right,' water quality in northern Cook County doesn't suffer that much."

Glenn Pratt, chief of the Region V Permits Assistance Branch, pretty much agrees, saying that, "The beaches in that area this summer should probably be in their best condition in the past 25 years."

In Chicago itself, most of the numerous lakefront beaches should be in pretty good shape, according to Steve Karshen, superintendent of sanitation for the Chicago Park District.

"The beach areas at the far north end of the city — Howard, Juneway and Touhy — probably will be in somewhat better condition than the remainder. But that remainder will be in better shape than last year, which in turn were much improved over

J & L Steel is not in NPDES violation

Contrary to the box accompanying last month's story on the National Pollutant Discharge Elimination System program, Jones and Laughlin Steel's Hennepin Works IS NOT one of the more serious permit violators in Region V.

In fact, according to Carol Foglesong, chief of the NPDES Compliance Unit, the J&L Hennepin Works plant has not been cited for NPDES permit violations.

"We failed to doublecheck our records. Thus we deeply regret any embarrassment suffered by Jones and Laughlin Steel for including their name on the list. It should not have been there," Foglesong said.

1974," he said.

And like Gene Theios, he credits the improvement at the northern beaches to the rejuvenation project at the North Shore Sanitary District facilities.

"I'm not as familiar with the specific improvements as Mr. Theios probably is, but whatever they've done, it's been reflected among our northern beach areas."

With only the mouse's share of Lake Michigan shoreline, the beach situation in Indiana is somewhat compact. Says Jim Scott, a sanitarian with the Porter County Health Dept., "Once you eliminate the areas that are privately owned, you're left with about a five- or six-mile stretch of beach in Porter County. And of that, swimming is allowed only along about a half-mile stretch in the Indiana Dunes State Park.

"And as far as that area is concerned, we've never had more than minor problems with elevated bacteria count. We don't expect any such problems this summer."

The situation isn't quite so rosy at the beaches along Lake Michigan in Indiana's Lake County. East Chicago and Whiting are scheduled to be open, according to a Lake County Health Dept. official, but there may be some problems with bacteria count.

"I'd say the chances on Whiting being open are about 50-50," the official said.

But Glenn Pratt wasn't so optimistic. "There are still some rather serious bacterial problems at the beaches in the Gary-Hammond-Whiting area, especially the latter. If the guy who said he figured the chances on Whiting being open this season are 50-50, I'd be happy to cover his bet. And until the treatment facility at Whiting is upgraded, I don't look for the situation to improve much. The beach can probably be opened for summer of 1977, but I don't hold out much hope for this year," Pratt added.

But all in all, Lake Michigan this summer is about 99 per cent a situation of "Come on in, the water's fine."

ONCE OVER LIGHTLY



State PCB legislation moving ahead briskly

There's good news on the polychlorinated biphenyl (PCB) front these days — two-thirds of the states in Region V have or are on the verge of enacting laws regulating the toxic substance.

Although Illinois and Ohio aren't off the drawing board yet, the governors of Indiana and Michigan have signed PCB legislation into law. Similar action is expected momentarily by the governors of Minnesota and Wisconsin.

According to Dr. Ken Aplegate, chief of the division of water quality for the Ohio EPA, "To my knowledge, there is no formal PCB legislation pending at this point. And if it's informal, that's not much good."

Bernard P. Killian, legislative liaison for the Illinois EPA, said that, "As of April 1, there has been no PCB bill introduced. There was a perfunctory session scheduled April 2, but I haven't heard whether any PCB legislation was forthcoming.

"But even if it had been, it is very unlikely the bill would be considered this year. The legislature is sticking to their rules that only appropriations bills and bills of an emergency nature are going to be considered this spring. And I don't think a bill regulating PCBs is something they'd consider an emergency bill."

ERL director named to IJC advisory board

The director of EPA's Environmental Research Laboratory in Duluth, Minn., has been named U.S. chairman of the In-

ternational Joint Commission's Great Lakes Research Advisory Board.

Dr. Donald Mount will be involved in the coordination and direction of the nine committees on the board in their efforts to survey ongoing research and identify the research needed in the Great Lakes.

A bi-national agency established under the Boundary Waters Treaty of 1909 between the U.S. and Canada, the commission set up the 16-member board as its chief advisor regarding research relating to implementation of the Great Lakes Water Quality Agreement of 1972. It is comprised of representatives of government, universities, industry and citizens.

New dates announced for NTIS seminar

The two-day seminar to familiarize EPA and state environmental agency people with the National Technical Information Service system for controlling Agency reports has been rescheduled for June 14-15.

To be held in the Illinois Room of Chicago's LaSalle Hotel, the meeting is designed to acquaint federal and state workers with a variety of NTIS functions. They include descriptive cataloging, input processing-accessioning, subject classification, subject indexing, abstracting, announcement and retrieval.

All EPA reports are required to be entered in the NTIS system.



Emission lapse forces 72-73 Toyota recall

Toyota Motor Sales, U.S.A., has initiated a service campaign on its 1972 and certain 1973 Corolla and Carina models with 1,600 cc engines. Under the campaign, owners are being notified to bring their autos in for inspection and, if necessary, repair of the choke system.

EPA's Mobile Source Enforcement Division has been investigating reports of choke stove pipe failures in 1972 and certain 1973 Corollas and Carinas. Such failures could affect the operation of the choke system and, in turn, the driveability and emissions performance of the vehicle.

Stanley Legro, EPA assistant administrator for enforcement, indicated the campaign will affect about 194,000 vehicles.

Michigan DNR seeks citizens' suggestions

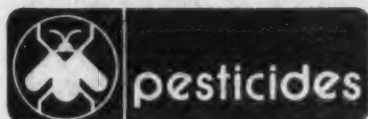
Michigan citizens concerned about the future of any portion of the Great Lakes shoreline are urged by the Department of Natural Resources to submit special nominations for coastal "Areas of Particular Concern."

More than 250 nominations were received by the original April 1 deadline, but due to the overwhelming response, the ideas will be accepted from now on, said a DNR spokesman.

The spokesman added a proposed "APC" may include either bottomlands or areas within one-half mile inland from the shoreline of a Great Lake, connecting waterway or connecting lake.

Nomination forms may be

obtained from the Citizens Shorelands Advisory Council, DNR, Stevens T. Mason Building, Lansing, Mich. 48926.



Bald eagle victim of chemical poisoning

A bald eagle found dead on the shore of Cass Lake, Minn., in May 1975 has been termed a victim of pesticide poisoning.

A heavy fish eater, the eagle was termed a "chemical garbage can" by a U.S. Fish and Wildlife Service official. An autopsy and chemical analysis disclosed the bird had a high concentration of dieldrin, a long-living insecticide that until recently was used against corn rootworm.

The eagle also had high amounts of DDT and its breakdown products, heptachlor epoxide, chlordane isomers; mirex; toxaphene and hexachlorobenzenes.

Some lake trout over toxic level guidelines

A study prepared by water quality specialists for the Michigan Dept. of Natural Resources reveals that some Lake Superior lake trout contain levels of toxic materials which exceed U.S. Food & Drug Administration guidelines for safe consumption.

The materials, including mercury, DDT and PCBs, were not found to be excessive in other fish species samples — chubs, lake herring and whitefish.

Although sources of the toxic materials have not been identified, the study said, lake trout found in western Lake Superior — especially in the Isle Royale vicinity — were found with mercury levels greater than one part per million, more than twice the FDA minimum tolerance level for human consumption.



Republic Steel will follow Ohio air regs

Republic Steel Corporation and the Ohio EPA recently signed consent and abatement orders covering the company's compliance with state air regulations for suspended particulates at four of Republic's northeast Ohio plants.

The facilities affected by the order are the Youngstown and Warren steel plants in the company's Mahoning Valley District and the Canton and Massillon plants in the Central Alloy District. The orders provide for improvements to the four plants which company officials estimate will cost approximately \$60 million.

The consent order for the Canton facility specifies that Republic will make air pollution control improvements on its electric steel making furnaces and scarfing operations. At the Massillon facility, improvements will be made on the coke batteries, boilers and scarfing operations.

Under the agreement, improvements will be made at the coke and sinter plants and on the boilers and reheating furnaces at the Youngstown operation, while improvements at the Warren operation include the basic oxygen furnace, sinter and coke plants, and the boilers.



New apparatus may save up to 5 GPF

A new kind of toilet tank which uses compressed air is said to save as much as five gallons of water per flush (GPF).

According to the manufacturer, Water Control Products of Troy, Mich., ordinary water pressure in water supply lines is used to build air pressure in a compact steel

tank which replaces the conventional gravity tank.

The air pressure then provides a fast flushing action using only 2½ gallons of water. The firm expects to sell the device for \$50.

Cuyahoga plagued by low dissolved oxygen

Low dissolved oxygen levels continue to be a problem in the Cuyahoga River, according to a recently-completed EPA study.

The study concludes that although municipal and industrial wastewater treatment programs will result in improved dissolved oxygen conditions, run-off and benthic oxygen demand will still mean a severe oxygen sag in the navigation channel during summer low flows.

The report, "Water Pollution Investigation: Cuyahoga River and Cleveland Area," says that even with the municipal and industrial treatment programs scheduled for implementation in 1978, the lower Cuyahoga will have difficulty supporting anything but the most pollution-tolerant aquatic life forms.

New hope in cancer treatment established

Discoveries of new cancer-causing agents provide reason for optimism about cancer prevention and treatment, according to the director of cancer research at New York's Mount Sinai Hospital.

Dr. Irving Selikoff is part of a medical-scientific team studying the cancerous effects of asbestos fibers like those found in Duluth, Minn., drinking water.

He added that the high rate of cancer found in mine workers exposed to asbestos fibers is "due to exposures that were very, very heavy and to which we didn't pay much attention. The people becoming sick now were implanted with the disease 20 years ago."

As more becomes known about cancer and its causes, said Dr. Selikoff, researchers can pinpoint high risk groups exposed to those causes, making early detection and treatment possible.

Ohio citizens don't want water standards lowered

Ninety-five per cent of the citizens in northwest Ohio oppose lowering water quality standards in order to reduce the cost of pollution abatement, according to a survey sponsored by the Toledo Metropolitan Council of Governments.

About 2,000 people responded to the questionnaire, which asked which approaches to pollution abatement are most acceptable and what the most serious obstacles are to solving the various problems.

More than 70 per cent of those answering approve of additional local regulation of land uses affecting water quality; 65 per cent back more local regulation of growth and development patterns; and 50 per cent approve of increased spending on local water quality programs.

But on the other hand, there was marked opposition to increased federal legislation and spending, although 50 per cent of the respondents felt that enforcement of existing laws is seriously lacking.

Region V to prepare EIS on Columbus

An environmental impact statement will be prepared for the Columbus, Ohio, facilities plan for sewage treatment, due to significant effects on the environment which may result from its implementation.

A facilities plan consists of engineering analyses and an environmental assessment of alternative treatment systems prepared by a municipality and its consultants whenever federal funding is requested for construction of wastewater treatment facilities.

Prepared by Region V, the EIS will evaluate the environmental effects of implementing treatment system alternatives, including the possibility of adding New Albany and Reynoldsburg to the Columbus system and the need for facilities to handle and dispose of residual sludges produced at its two sewage treatment plants — Jackson Pike and Southerly.

The 'little man' gets his say

Citizens told it as they saw it during a recent series of public meetings of the Great Lakes Basin Commission.

The criticisms swirled around proposed recommendations of the Great Lakes Basin Framework Study in Duluth, Cleveland, Chicago and Detroit, among other locales.

Criticism of the proposed recommendations included the brief notification of the public meetings, the general nature of the recommendations, and lack of emphasis on resource conservation, especially energy.

There were also objections to the assumed growth of nuclear power plants along the Great Lakes shores, use of the lakes for power plant cooling, and lack of support for alternative sources of energy supply. Lack of emphasis on commercial fishing, support for commercial navigation, and inclusion of some specific projects and not others in the proposed recommendations were among other objections raised at the public meetings.

News for Government

LOCAL REPORT

Following is a list of communities, jurisdictions, etc. in Region V that received grants from EPA between Mar. 19, 1976 and April 20, 1976. Most of the grants were for sewage treatment projects of one kind or another and totaled \$40,718,623.

ILLINOIS

Alhambra, 4 / 13, \$1,337; Barrington, 4 / 6, \$300; Bonnie Brae-Forest Manor Sanitary District, 3 / 24, \$62,250; Carrier Mills, 4 / 7, \$13,875; Danville Sanitary District, 4 / 12, \$45,918; Franklin, 3 / 29, \$2,250; Glendale Heights, 3 / 22, \$73,725; Grand Ridge, 3 / 22, \$7,125; State of Illinois, 3 / 19, \$133,906.

Illioopolis, 3 / 31, \$16,050; Jerseyville, 3 / 30, \$95,550; Kansas, 3 / 22, \$14,850; Lincoln, 3 / 31, \$188,475; Moline, 3 / 29, \$789,225; Metropolitan Sanitary District of Chicago, 4 / 15, \$8,693,540; New Braden, 4 / 15, \$18,300; Pierron, 3 / 30, \$8,850; Wauconda, 3 / 25, \$58,200. Illinois total: \$10,223,736.

INDIANA

Advance, 3 / 31, \$11,175; Andrews, 3 / 31, \$6,750; Brooklyn, 4 / 12, \$77,175; Burlington, 3 / 31, \$10,275; Camden, 3 / 24, \$24,101; Decatur, 4 / 14, \$29,400; Ellettsville, 3 / 19, \$6,375; Fort Branch, 4 / 15, \$9,000; Fortville, 3 / 31, \$6,225; Greenwood, 4 / 15, \$2,625; Hartford City, 3 / 31, \$12,000; Hebron, 4 / 14, \$10,050; Indianapolis, 4 / 9, \$7,932,225; Mentone, 3 / 31, \$11,325; Morgantown, 4 / 13, \$6,750.

Naysville Regional Sewer District, 3 / 25, \$19,500; Richmond Regional Sanitary District, 4 / 14, \$1,050; Rising Sun, 4 / 5, \$238,725; Scott County Regional Sewer District, 3 / 31, \$7,500. Indiana total: \$8,448,926.

MICHIGAN

Antrim County Bureau of Public Works, 4 / 15, \$63,150; Barry County Dept. of Public Works, 4 / 14, \$55,500; Bay City, 3 / 23, \$218,570; Beaverton, 4 / 13, \$6,600; Calhoun County Bureau of Public Works, 3 / 22, \$136,850; Carsonville, 4 / 12, \$4,125; Charlotte, 4 / 14, \$66,375; Chesaning, 3 / 22, \$1,725; Clinton, 3 / 25, \$87,000; Crystal, 3 / 25, \$57,825.

Delhi Charter, 3 / 23, \$4,500; Fairfield, 3 / 31, \$3,000; Forsyth, 4 / 6, \$8,775; Fowlerville, 3 / 30, \$15,000; Grand Rapids, 4 / 7, \$13,650; Gratiot County Dept. of Public Works, 4 / 15, \$15,975; Grafton, 3 / 31, \$20,625; Grayling, 3 / 25, \$46,125; Green Oak, 3 / 31, \$25,875; Kent City, 4 / 15, \$19,725; Lake Odessa, 4 / 8, \$68,400; Leighton, 4 / 14, \$7,500.

Lenawee County Drainage Commission, 3 / 19, \$57,900; Luce County Dept. of Public Works, 4 / 15, \$38,775; Macomb County Health Dept., 4 / 1, \$24,400; Michigan Water Resources Commission, 4 / 6, \$134,014; Minden City, 4 / 13, \$3,750; Northport, 3 / 25, \$21,000; Peck, 3 / 31,

\$5,100; Roscommon, 4 / 14, \$34,415; Saginaw County Dept. of Public Works, 4 / 8, \$7,275.

South Lyon, 4 / 12, \$143,550; Southern Clinton County Sanitary District, 4 / 15, \$40,050; St. Joseph County Bureau of Public Works, 4 / 15, \$38,850; Stockbridge, 3 / 31, \$11,250; Tuscarora, 3 / 23, \$36,000; Washtenaw County Dept. of Public Works, 4 / 16, \$486,450. Michigan total: \$2,029,749.

MINNESOTA

Benton County, 3 / 26, \$19,350; Caledonia, 4 / 7, \$26,875; Dakota, 3 / 26, \$5,475; Dover-Eyota-St. Charles Sanitary District, 4 / 7, \$486,900; Lakefield, 3 / 31, \$27,465; Monticello, 3 / 29, \$77,025; New Auburn, 3 / 30, \$1,624; Preston, 3 / 19, \$10,650; Sartell, 3 / 30, \$23,100; St. Stephen, 3 / 25, \$10,575; Walker, 3 / 26, \$59,951. Minnesota total: \$748,990.

OHIO

Bloomington, 4 / 9, \$81,750; Canton Health Dept., 4 / 2, \$250,449; Fort Jennings, 4 / 14, \$33; Mansfield-Richland County Health Dept., 3 / 29, \$33,530; Medina, 3 / 25, \$17,472,225; Portsmouth Health Dept., 3 / 30, \$99,100; Reynoldsburg, 3 / 31, \$11,475; Thurston, 3 / 31, \$62,100; Youngstown, 4 / 14, \$455,175. Ohio total: \$18,465,887.

WISCONSIN

Antigo, 3 / 26, \$57,657; Augusta, 3 / 26, \$37,575; Belmont, 3 / 30, \$8,475; Cameron, 3 / 29, \$14,925; Casco, 4 / 7, \$268,425; Eau Claire, 3 / 29, \$11,700; Hixton, 4 / 7, \$8,475; Kewaunee, 4 / 9, \$2,210; Norway Sanitary District No. 1, 3 / 30, \$20,325; Rhinelander, 4 / 9, \$30,075; Superior, 4 / 6, \$299,475; Wisconsin Dept. of Natural Resources, 3 / 21, \$42,000. Wisconsin total: \$801,335.

FEDERAL REGISTER

MARCH 19

Rules

Motor vehicle economy; 1976 model year

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

2,4-dichlorophenoxyacetic acid

Notices

Impact statements and other actions impacting the environment, agency comments

MARCH 22

Rules

Air Pollution; standard of performance for new stationary sources:

Connecticut, authority delegation (2 documents)

Air quality implementation plans, various states, etc.:

Vermont

Notices

Air pollutants, hazardous; national emission standards:

Connecticut

M-44 sodium cyanide capsules; registration; proposed modification

Pesticide chemicals, etc.; petitions:

Mobil Chemical Co

Monsanto Agricultural Products Co

Pesticide registration:

Application (3 documents)

Water pollution control; discharge of pollutants:

New York

Wisconsin

Edwards Underground Reservoir; public hearing

Issuance of a Specific Exemption to Use 2,4-D to control Eurasian Watermilfoil in Tennessee

Meetings:

Technical Advisory Group

Motor Vehicle Pollution Control:

California; hearing

MARCH 23

Rules

Air quality implementation plans, various States, etc.:

Delaware

Pesticide chemicals in or on raw agricultural commodities:

2-n-Octyl-4-isothiazolin-3-one

Water pollution; effluent guidelines for certain point source categories:

Pulp, paper, and paperboard

Proposed Rules

Pulp, paper, and paperboard, point source category; extension of comment period

Notices

Pesticides, specific exemptions and experimental use permits:

Chevron Chemical Co

Elanco Products Co

Oregon Department of Fish and Wildlife

South Carolina

MARCH 24
(No Listings)

MARCH 25

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Benomyl

Notices

Pesticide programs:

Presumption against continued registration of Kepone (2 documents)

Pesticide registration:

Applications

MARCH 26

Rules

Oil pollution prevention; miscellaneous amendments

Proposed Rules

Water pollution; effluent guidelines for certain point source categories:

Steam electric power

Notices

Pesticides, specific exemptions and experimental use permits:

American Cyanamid Co

Hercules, Inc

Pesticide applicator certification; State plans:

New Jersey

Pesticide registration:

Applications (2 documents)

MARCH 29

Rules

Water pollution; effluent guidelines for certain point source categories:

Iron and steel manufacturing

Proposed Rules

Air quality implementation plans, various States, etc.:

Nebraska

Effluent guidelines for certain point source categories:

Iron and steel

Notices

Pesticide registration:

Application

Temporary tolerance:

4-butyl

2H-1,2,4-triazole

MARCH 30

Rules

Air quality implementation plans; various States, etc.:

Maryland; correction

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Butralin

Notices

Pesticide registration:

Applications (2 documents)

Pesticides, specific exemptions and experimental use permits:

Monsanto Co

Water pollution control:

Colorado River system

MARCH 31

Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Oxytetracycline Hydrochloride

Proposed Rules

Energy-related authority, compliance date extension:

New York

Notices

Environmental statements; availability of agency comments

Meetings:

Administrator's Pesticide Policy Advisory Committee

Pesticide applicator certification; State plans:

Montana

Oregon

APRIL 1

Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Inert ingredients; correction

Norflurazon

Water pollution; effluent guidelines for certain point source categories:

Organic chemicals manufacturing; revocation

Proposed Rules

Air quality implementation plans; various states, etc.:

Pennsylvania

Notices

Fuels and fuel additives; suspension of enforcement and regulation of lead additives in gasoline

Meetings:

Environmental Health Advisory Committee

Pesticide programs:

Enforcement Policy

Recommended procedures for disposal of PCB-containing wastes

Pesticide registration:

Applications (4 documents)

Pesticides, specific exemptions and experimental use permits:

Zoecon Corp

APRIL 2

(No Listings)

APRIL 5

(No Listings)

APRIL 6

Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Bacillus Thuringiensis, Berliner

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Dimethyl tetrachloroterephthalate

Terbacil

Notices

EPA Science Advisory Board Advisory Committees; renewal

Pesticide applicator certification; State plans:

Hawaii

West Virginia

Pesticide chemicals, etc.; petitions:

Rohm and Haas Co

Shell Chemical Co

Pesticide registration:

Applications (4 documents)

Pesticides, specific exemptions and experimental use permits:

Mobil Chemical Co (4 documents)

APRIL 7

Proposed Rules

Air pollution, standards of performance:

Steam electric power

Notices

Meetings:

Environmental Pollutant Movement and Transformation Advisory Committee

National Drinking Water Advisory Council

Pesticide chemicals, etc.; petitions:

Chemagro Agricultural Div., Mobay Chemical Co

Pesticide registration:

Applications (3 documents)

APRIL 8

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc. 2,4-D

Notices

Air pollutants; addition of lead to listing

Pesticide applicator certification; State plans:

Michigan

Pesticide registration:
 Applications (3 documents)
 Pesticide tolerance in or on certain raw agricultural commodities and food additive; petitions:
 American Cyanamid, et al
 Pesticides, specific exemptions and experimental use permits:
 Army Environmental Hygiene Agency (2 documents)
 Cities Services Co
 Diamond Shamrock Corp
 Merck & Co., Inc
 Shell Chemical Co
 Washington State Department of Agriculture

APRIL 9

Notices

PCB-containing wastes (industrial facilities); recommended procedures for disposal; correction

APRIL 12

Rules

Air quality implementation plans; various States, etc.:

California

New Jersey

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Captafol

Proposed Rules

Air quality implementation plans; various States, etc.:

Arkansas

Notices

Air pollution; ambient air monitoring reference and equivalent methods (2 documents)

Meetings:

Environmental Measurement Advisory Committee

Temporary tolerance, establishment:

Certain residues and metabolites containing 2,4-dimethylaniline

APRIL 13

Rules

Noise abatement programs:

Medium and heavy trucks

Proposed Rules

Air quality implementation plans, various States, etc.:

Maine

Notices

Cost-effectiveness analysis; annual review and determination, change of interest rate

Environmental statements; availability of agency comments

APRIL 14

(No Listings)

APRIL 15

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions:

Tricyclohexyltin Hydroxide 2,4-D

Notices

Meetings:

Science Advisory Board Environmental Health Advisory Committee

Pesticide programs:

State registration to meet special local needs; interim certification, various States

Pesticides, specific exemptions and experimental use permits:

BASF Wyandotte Corp

Dow Chemical Co

Elanco Products Co. (3 documents)

Idaho State Department of Agriculture

Monsanto Agricultural Products Co

Monsanto Chemical Co., Inc.; correction

Rentokil, Inc

U.S. Forest Service (2 documents)

Zecon Corp

* U.S. Government Printing Office: 1976 - 650-516 P.O.: NO. 8/Regional V-1.

ENVIRONMENT MIDWEST ENVIRONMENTAL PROTECTION AGENCY

Office of Public Affairs

230 South Dearborn

Chicago, Illinois 60604

THIRD CLASS

POSTAGE AND FEES PAID
 ENVIRONMENTAL PROTECTION AGENCY

EPA-335



Return this sheet if you do NOT wish to receive this material, or if a change of address is needed. (Indicate change, including zip code.)



Environment Midwest

REGION V
UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY

JUNE 1976

**Administrator Train
discusses the Agency
Page 3**

**Care and feeding of
sewage plants
Page 12**

**Once Over Lightly
Page 14**



What are your feelings about a question and answer page?

Recently, I was interviewed by a Chicago radio personality who covered a wide range of topics and whose weekly show reaches across some 38 states. It gave me an opportunity to explain EPA positions on numerous issues to probably tens of thousands of people—communication in one of its finest forms.

But no matter how many environmental questions we answer, there always seem to be more heading our way, sometimes at a leisurely pace, but more often demanding explanations on fairly short notice. Effective communication in this regard is of the utmost importance.

It has been suggested that this page be converted into a sort of "environmental Ann Landers" column on at least a periodic basis. It would be devoted to questions from readers about their environmental concerns and answered by the people here in Region V most thoroughly acquainted with the particular subject.

There are pros and cons to this idea, just like there are to most others, but on the surface at least, I think it is a sound one. With the circulation of *Environment Midwest* nudging 25,000, such a forum would reach a wide range of individuals and groups such as librarians, radio and TV stations, newspapers, government officials, business and industry leaders, and school administrators.

No doubt they all at one time or another have had a question about the environment and EPA's role in protecting it. Perhaps they found a quick answer from a friend intimate with the situation or even-



GEORGE R. ALEXANDER JR.

tually saw an article covering their area of concern in a magazine or newspaper.

But I think it is also true that they still have many unanswered questions, and maybe are not exactly sure of whom to contact for a response. Providing such a response (especially framed with reference to its application to Region V) would be the primary reason for inaugurating such a column.

I should stress again, however, that at this stage of the game the idea is still strictly that. There may be some considerations down the road that just would make this approach unwieldy or impractical. But I don't think the idea would die simply from a lack of interest or queries from our readers.

Of course, I still intend to reserve this page for myself when a particular issue arises that I feel merits my comments. For now, I'm considering the possibility of running the "Environmental Hot Line," so to speak, on an every-other-month basis.

Perhaps the first question to throw out for consideration would go to you, the readers of this magazine. What do you think of the idea? Let me know what you consider some of the pros and cons of such a format. I'll sort through your responses and let you know what our final decision is in the not-too-distant future.

As I mentioned, communication is the name of the game—especially where environmental issues are concerned.

Environment Midwest is a monthly newsletter published by the Public Affairs Office, Region V EPA, 230 S. Dearborn, Chicago, Ill. 60604.

George R. Alexander, Jr. Administrator
Valdas Adamkus Deputy Administrator
Frank Corrado Public Affairs Director
Matt Racki Editor

SPECIAL SECTION

Looking down the road

(Recently, EPA Administrator Russell E. Train appeared before the Committee on Interstate and Foreign Commerce of the U.S. House of Representatives to discuss EPA operations, with particular emphasis on issues relating to regulatory reform. His statement included a description of the Agency's overall mission, progress to date in fulfilling that mission, and a look at the future. We are presenting his speech in its entirety to help our readers know where EPA is and where it is going.)

Agency Mission

EPA was created through an executive reorganization plan designed to consolidate certain federal government environmental activities into a single agency. The plan was sent by the President to Congress on July 9, 1970, and EPA was established as an independent agency in the Executive Branch on December 2, 1970.

EPA was formed by amalgamating 15 components from five departments and independent agencies. Water quality responsibilities were transferred from the Interior Department (the Federal Water Quality Administration) and the Department of Health, Education, and Welfare (the Bureau of Water Hygiene). Other activities transferred from HEW included the National Air Pollution Control Administration and the Bureau of Solid Waste Management.

In addition, EPA acquired the Department of Agriculture's authority to register pesticides and to regulate their use; the Food and Drug Administration's authority to set tolerance levels for pesticides which occur in or on food and to monitor compliance with those limits; and a portion of the Department of Interior's pesticides research program.

Finally, EPA assumed some of the Atomic Energy Commission's and HEW's authority for setting environmental radiation protection standards. The agency also absorbed the duties of the Federal Radiation Council. Since the creation of EPA in 1970, a number of changes have been made in its statutory mandate. A summary of all of EPA's current statutory authority follows.

Air

The Clean Air Act of 1970 as amended in June, 1974, is the basic authority for the air pollution control program. The act is set into motion through the establishment by EPA of national ambient air quality standards for pollutants which have an adverse effect on public health and welfare. In order

to achieve, maintain and enforce these standards, each state must formulate a state implementation plan which is submitted to EPA for approval. The act also directs EPA to set standards of performance for new and modified stationary sources of pollution and emission standards for hazardous pollutants.

Concerning emissions from automobiles, the 1970 Act directed EPA to establish regulations requiring a 90 per cent reduction in the emissions of carbon monoxide (CO), hydro-carbons (HC) and oxides of nitrogen (NOx) from 1970 model year levels by 1975. In June of 1974, however, passage of the Energy Supply and Environmental Coordination Act (ESECA) deferred the imposition of the 90 per cent reduction. ESECA provided that (1) the 1975 federal and California interim standards would also be applicable to the 1976 model year, (2) the original statutory standards for HC and CO would be applicable to the 1977 and subsequent model years, (3) the interim NOx standard would be applicable to the 1977 model year, (4) the original statutory NOx standard would be applicable to the 1978 and subsequent model years, and (5) any motor vehicle manufacturer could apply for a one-year suspension of the statutory HC and CO standards. The administrator also has authority to regulate fuels and fuel additives for motor vehicles.

Water Quality

The Federal Water Pollution Control Act Amendments of 1972 are the primary authority for the water pollution control program. The law directs EPA to set effluent limitations on discharges of pollutants from industrial and municipal sources. The law states that limitations, requiring the application of the "best practicable control technology" for industries (secondary treatment for municipal sources), shall be achieved by July 1, 1977. Effluent limitations requiring the "best available technology" for industrial sources and "best practicable waste treatment technology" for municipal sources shall be achieved by July 1, 1983.

Water quality standards are established which consist of a designation of the use of a stream (recreational purposes, agricultural and industrial, public water supply, etc.) and water quality criteria sufficient to protect the stream for such uses. The Federal Water Pollution Control Act established a program of federal grants for con-

SPECIAL SECTION

struction or major modification of waste water treatment plants.

The act places major emphasis on planning. Facility planning is carried out by local agencies to ensure that the most effective and efficient type of waste treatment will be selected. Integrated planning and management agencies are required to be established for all major metropolitan areas; statewide planning is also required. The act authorizes federal financial support to these State and local agencies.

Water Supply

The Safe Drinking Water Act of 1974 is the basic authority for the water supply program. The act directs EPA to establish primary and secondary drinking water standards—primary standards will be those necessary to protect public health, secondary regulations will be those necessary to protect the public welfare. The states have the primary responsibility for enforcing the regulations.

The act authorizes grants to the states to aid them in establishing enforcement and monitoring programs and requires EPA to publish regulations for state underground injection control programs. These regulations are to prohibit, after December 1977, underground injections which are not authorized by state permits.

Solid Wastes

The Solid Waste Disposal Act as amended by the Resource Recovery Act of 1970 is the authority for EPA's solid wastes program. The act directs EPA to promote the demonstration, construction and application of solid waste management and resource recovery systems necessary to preserve the environment and natural resources.

EPA is also required to provide technical and financial assistance to states and local governments and interstate agencies in the planning and development of resource recovery and solid waste disposal programs. The act further directs EPA to establish guidelines for solid waste collection transport, separation, recovery, and disposal systems. These guidelines should be consistent with public health and welfare and any established federal air and water standards.

Pesticides

The Federal Insecticide, Fungicide and Rodenticide Act as amended by the Federal Environmental Pesticides Control Act of 1972 and P.L. 94-140 of 1975, is the basic authority for the pesticides program. It authorizes a comprehensive program to regulate the manufacturing, distribution and use of pesticides as well as major

research efforts into the effects of pesticides.

All pesticides must be registered and classified for "general" use or "restricted use" by October 1977. Those placed in the restricted category may be used only by, or under the supervision of, certified applicators. The states are required to certify pesticide applicators to use restricted pesticides. The use of any registered pesticides in a manner inconsistent with labeling instructions is prohibited by the act. The label directions and precautions are approved by EPA at the time of registration. Misuse of a pesticide is subject to civil and criminal penalties. Under the act, states may register pesticide products or issue experimental permits to meet special local needs.

The act authorized federal assistance to the states for enforcement and to help develop and administer applicator certification programs. EPA may conduct research on pesticides and alternatives, issue experimental use permits, and monitor pesticide use and presence in the environment. The act further authorized the administrator to cancel the registration and/or suspend the use of pesticide products that pose an unreasonable risk to man or the environment.

Radiation

There is no single act which establishes the authority for EPA's radiation abatement and control program. Under Reorganization Plan No. 3 of 1970, which established EPA, certain broad authorities were transferred to EPA. These, together with authorities vested under other federal acts but applicable to the EPA radiation program, establish the functional parameters for the program.

Under the reorganization plan, the Federal Radiation Council's responsibility to provide broad guidance for all aspects of radiation protection was transferred to EPA. In addition, EPA was transferred the function of the Atomic Energy Commission to establish environmental radiation protection standards. Under the Public Health Service Act, EPA has the authority to monitor radiation levels in the environment, and to assist the states in radiation control efforts. The Marine Protection Research and Sanctuaries Act provides EPA with the authority to control the ocean disposal of radioactive wastes.

The radiation control and abatement program has two additional authorities. First, the Safe Drinking Water Act of 1974 authorizes EPA to set maximum containment levels for radioactivity in public water systems. Second, EPA may have authority to set effluent limitations on the discharge of radioactive materials into surface waters, but this jurisdiction is presently under court review.

SPECIAL SECTION

Noise

The Noise Control Act of 1972 is the authority for EPA's noise abatement and control program. The act directs EPA to identify products which are major sources of noise, and to establish noise emission standards for newly produced products, necessary to protect the public health and welfare, taking into consideration technology and costs. EPA is to enforce compliance with these standards.

The act also directs EPA to submit proposed regulations to control aircraft and airport noise to the Federal Aviation Administration which shall consider them prior to prescribing the same regulations, a modified regulation or no regulation. If EPA believes the FAA's action does not protect the public health and welfare it may request the FAA to review its decision and make public the reason for its action.

EPA may prescribe labeling regulations for any product which emits noise capable of affecting the public health and welfare or which is sold on the basis of its effectiveness in reducing noise. Furthermore, the act directs EPA to establish noise emission standards for equipment in use by railroads and interstate motor carriers.

Progress to date

The following is a summary in each program area of progress to date in achieving the EPA mission.

Air

There has been marked success in reducing some pollutant levels in the past several years. The national composite trend for particulate matter (soot, smoke, etc.) concentration shows an approximate 17 per cent decline from 1970 to 1974, to a point below the level necessary to protect human health in many areas of the country. Preliminary evaluation of data for 1975 indicates the decline is continuing. However, in many other areas, principally urban centers, the problem is still severe. For example, in Los Angeles the annual mean of measured particulates in 1974 was 1.6 times the level necessary to protect human health, in Chicago 2.0 times the level, and in New York City 1.3 times (for the high station in each community).

Of the 247 Air Quality Control Regions (AQCRs), 115 (47 per cent) are judged likely to attain the primary National Ambient Air Quality Standards for total suspended particulates (TSP) by the statutory date. Major contributing factors have been identified for 100 of the 132 AQCRs that are not expected to attain: fugitive dust (67 AQCRs), point sources (19 AQCRs), and smaller sources (14 AQCRs).

Levels of sulfur dioxide are being reduced largely as a result of the switch to "cleaner" fuels. The data from 258 sites in 1974 indicates a 32 per cent

decrease from the 1970 annual composite average concentration. Eighty-six percent of the AQCRs are expected to attain the NAAQS for sulfur dioxide by the statutory date. The problem in non-attainment areas appears generally to be emissions from large point sources. Further reduction in emissions from these sources should be accomplished in the near future with increases in the availability and installation of pollution control equipment. Of the approximately 20,000 identified major sources, 85 per cent now comply with applicable emission limits or are meeting compliance schedules.

Regarding the control of pollution from new motor vehicles, 1975 model year carbon monoxide and hydrocarbon emissions are approximately 60 per cent lower than the allowable 1970 average emission levels and 83 per cent lower than the average of uncontrolled pre-1968 vehicles.

Carbon monoxide data from a few cities for which we can follow the trend from 1970 through 1974 does show an improvement consistent with the emissions control. Data from California, New York State, New Jersey, and Washington State show a considerable drop in the percentage of time the eight-hour concentration standard is exceeded.

For example, Los Angeles shows a drop to six per cent from an original level of about two per cent in excess of the eight-hour standard. Nevertheless, 1974 data show that for the most part the carbon monoxide (CO) primary ambient air quality standard is not being attained in 58 of 92 regions from which we have good data. When the Federal Motor Vehicle Emission Standards are fully implemented to the reduction levels indicated by the Clean Air Act, the CO standard is expected to be attained in all but a few areas of the nation.

Due to the finding that the technology which might be required by most automobile manufacturers to meet further sharp reductions in emission standards, the catalytic converter and air pump, could significantly increase the emissions of sulfuric acid, EPA imposed interim standards of 1.5 grams per mile hydrocarbons and 15 grams per mile CO for 1977 model year automobiles.

Water quality

Three major elements are utilized under the Federal Water Pollution Control Act to control point source pollution: (1) establishing effluent limitations; (2) issuing wastewater discharge permits; and (3) improving the coverage and efficiency of public owned waste treatment works. Wastewater discharge permits generally require industrial sources to reduce the level of pollution to that achievable with the "best practicable technology" by 1977. Permits to be issued in the future will require the reduction of pollution to the level achievable with the "best available

SPECIAL SECTION

technology" by 1983.

In any event, the permit must require limitations which will be compatible with water quality standards. The permits include schedules for installation of control equipment or process changes. The issuance of the first round of National Pollutant Discharge Elimination System permits was virtually completed for major sources by the end of the 1975 fiscal year. Over 40,000 permits have been issued. EPA encourages state assumption of this program, and by the close of the 1975 fiscal year, 27 states are participating in the permit system. Through these federal and state efforts, we expect that all but a few hundred major industrial dischargers will be in compliance with the 1977 best practicable technology requirement, and half of the municipalities will be in compliance with the 1977 secondary treatment requirements.

Effluent guidelines for wastewater discharge sources have been issued for approximately 30 industries. Cement manufacture, phosphate production, rubber processing, agricultural feedlots, beet sugar processing, petroleum refining, glass manufacturing, pulp and paper manufacturers and the organic and inorganic chemical industry are examples of industries for which guidelines have been issued.

Through the wastewater treatment construction grants program, the coverage and effectiveness of publicly owned sewage treatment plants is being upgraded. A large proportion of the nation's population is presently served by sewage systems that do not provide adequate wastewater treatment. The grants cover up to 75 per cent of the costs of planning, designing and constructing sewage treatment plants—either new construction plants or modifications to existing plants. The federal Water Pollution Control Act Amendments of 1972 authorized \$18 billion of federal assistance. Of the \$18 billion authorized for new treatment works construction, over \$6.5 billion had been obligated by the end of FY 1975. In FY 1976, EPA plans to award about 6,000 construction grants totalling about \$5.6 billion. EPA has set the goal of obligating the entire \$18 billion authorization by the end of FY 1977.

Water supply

The Safe Drinking Water Act, under which EPA's program now operates, was signed into law in December 1974. The act gives the agency broad responsibilities and authorities to protect and improve the quality of potable water. Prior to the act, EPA's water supply authorities were quite limited.

The major feature of our implementation program has been a careful effort to involve the States in developing the associated implementation regulations. We have held a series of meetings with

the states to discuss the EPA Safe Drinking Water Strategy document, Interim Primary Drinking Water regulations, state implementation and grant regulations and the Underground Injection Control Program regulations.

The major program accomplishments include: (1) appointment of the members of the National Drinking Water Advisory Council; (2) promulgation of the National Interim Primary Drinking Water regulations and the proposal of radiation regulations; (3) award of a demonstration grant to the City of Duluth for a project relating to asbestos removal; (4) publication of state program and grant regulations in the "Federal Register."

During the coming year, EPA will promulgate state implementation and grant regulations as well as Underground Injection regulations; publish guidelines for designation of sole source aquifers; promulgate secondary drinking water regulations; publish revised standards including treatment guidelines based upon the National Academy of Sciences study; initiate field activities for a year-long study of rural water supplies; develop EPA implementation programs for those states not accepting primacy under the Safe Drinking Water Act; and continue to provide technical assistance to the states in the implementation of their programs.

Solid wastes

The basic tools employed to meet the solid waste program's goals are threefold: (1) characterization of the problems associated with solid waste management and analysis of waste management alternatives with particular attention to hazardous wastes, (2) development of improved disposal and materials recovery methods and demonstration of advanced technologies, and (3) providing technical assistance to states and local governments to stimulate implementation of more cost effective and environmentally sound collection and disposal practices, solid waste regulatory action, and resource recovery systems.

The priority solid waste program activity is directed at the control of hazardous wastes. The dangers of chemical and other hazardous wastes are being evaluated and the technologies available to control this type of pollution are being assessed.

We are also proceeding with our efforts to assess the effects of non-hazardous wastes and the adequacy of available technology to control them. Investigatory work is being undertaken to determine the extent of occurrence and effects of leachate—water that has soaked through waste in land disposal sites and absorbed soluble or biological agents which, in some areas, may contaminate groundwater supplies.

Problems relating to the disposal of sewage

SPECIAL SECTION

sludge, particularly the heavy metals problem, and methods for resource recovery and proper disposal of other wastes such as waste oil are also being studied.

A major output of our various studies is information for the development of guidelines for solid waste disposal. To date, EPA has promulgated four guidelines: Land Disposal of Solid Waste, Thermal Processing of Solid Waste, Procurement of Recycled Materials, and the Collection of Residential Solid Waste. The agency has proposed three guidelines: Beverage Containers, Source Separation of Materials Recovery, and Implementation of Resource Recovery Facilities.

Pesticides

The agency is mandated to register pesticide products based on demonstrated efficacy and lack of "unreasonable adverse effects" to man and the environment. It is charged not only to register individual pesticide products, but also to classify those products into "general" or "restricted" use categories, an entirely new concept in the registration process.

"General" products, as the name implies, will be available to the general public; "restricted" products, due to the hazards involved in their use, will be subject to special restrictions, for the most part limiting their use to competent, certified applicators. After almost two years in draft and officially proposed form, regulations regarding the registration and classification of pesticide products were published in July 1975.

The Office of Pesticide Programs now has a tremendous job ahead in reregistering and classifying all pesticides in accordance with the new regulations, and in registering for the first time those products formerly marketed only within a state. It is estimated that approximately 43,000 products will be involved in this effort. The program has processed over 24,000 registration applications this past year, plus 170 petitions for "tolerances"—the allowable residue level for those products intended for use on food and feed crops.

The program also made progress in implementing the portion of the act pertaining to the certification of applicators to use "restricted" pesticides. Regulations setting standards for determining competence and regulations pertaining to the submission of state plans to carry out certification were completed and published in early 1975. Most of the states have enacted new or amended pesticides legislation to carry out their part of the certification process, and five final and 16 draft state plans have been submitted to the regional offices thus far. The Office of Pesticide Programs has prepared and distributed over one million applicator training manuals to states to aid

in the training process. It is expected that over one million applicators will be certified prior to the effective date of the requirement (October 1977).

In the area of pesticide cancellation, EPA has in the last year removed from the market four pesticides known to cause cancer in laboratory animals—aldrin and dieldrin, chlordane and heptachlor. Reviews are progressing to examine other suspect pesticides under the suspect chemicals program, and a review of alternatives to these products is underway in the substitute chemical review program. Under the latter program, over 40 substitutes to canceled or suspect chemicals have been reviewed, and results of six of these have been published, with more to come.

The Congress reviewed EPA's progress in implementing the amended FIFRA during 1975, and concluded that additional input from the agricultural and scientific communities should be assured. Further amendments to FIFRA were thus passed, requiring the agency to consult with the USDA and a new scientific panel to proposing regulations or cancellation actions. The administrator had already taken several significant steps to open the pesticides decision-making process more, the most important of these being the creation of a new Pesticides Policy Advisory Committee, to contain representatives from the agricultural community, other pesticide user groups, the pesticides industry, health experts, environmental organizations, and the general public. This body will serve to provide input from these varied interest organizations prior to EPA action concerning pesticide policies. It is hoped this effort may be expanded in the future to include areas other than pesticides.

Noise

To date, limitations on noise levels necessary to protect human health and welfare have been defined. The identification of major sources of noise has been initiated and standards and regulations designed to control noise are being promulgated.

Nine regulations for the control of aircraft noise have been proposed to the Federal Aviation Administration which, under the Noise Control Act, is required to hold public hearings and then to decide whether the regulations should be issued. Examples of such regulations include one which would require that landing approaches for jet airplanes not be below minimum altitudes which at present the FAA only "advises" and a regulation which would require the noise control retrofit of present non-conforming commercial and private jet aircraft to meet the levels currently specified for new aircraft.

Regulations have been promulgated by EPA to reduce noise from trucks presently in use as interstate carriers (over 10,000 pounds) and to reduce noise from trains. The practical effect of the in-

SPECIAL SECTION

Acoustic emission standards would be for requiring proper use or replacement of mufflers or tires by about 70,000 of the more than one million trucks and buses presently in operation.

The regulations proposed by EPA to limit noise from new medium and heavy duty trucks would reduce noise emanating from the 1978 model year trucks to 83 decibels, and the 1982 model year to 30 decibels. As the quieter trucks replace existing vehicles there will be a substantial decline in noise around construction sites, freeways and urban truck routes. In addition, regulations have been promulgated for portable air compressors which will also lower noise levels around construction sites. Both trucks and compressors had previously been identified as major sources of noise.

Six additional products have been identified as major sources of noise. These include buses, motorcycles, wheeled and tracked dozers, wheeled and tracked loaders, truck mounted refrigerator units, and truck mounted refuse compactors. We are proceeding with the development of regulations for new products of these types.

Other regulatory activity in the noise program centers around the development of labeling regulations which give notice to a prospective buyer of the level of noise the product emits or its effectiveness in reducing noise. Work is currently underway which will lead to the labeling of devices to protect the ear against injurious levels of noise. EPA is constructing a noise enforcement facility in Sandusky, Ohio to support new product noise enforcement activity.

Radiation

The EPA radiation program is directed toward preventing all avoidable contamination of the environment from ionizing radiation. The need for EPA to set standards for exposure to non-ionizing radiation is being reviewed and field studies of this problem are being carried out. EPA pursues these goals through three interdependent roles: (1) the development of standards and criteria, (2) assessment of the environmental impact of technology employed by other federal agencies, and (3) surveillance of radiation levels in the environment.

In the area of standards and criteria, EPA is working on standards for both short-lived and long-lived radionuclides. Long-lived nuclides are relatively permanent pollutants and their control is particularly important in view of the expected growth in the nuclear industry. Presently EPA is developing standards for the uranium fuel cycle. The objective is to promulgate standards for levels of planned releases that meet acceptable public health and environmental criteria for the total light water reactor fuel cycle such that continued operation of the industry is acceptable. Proposed

standards have been published in the "Federal Register" and an accompanying environmental impact statement has been issued.

Federal guidance is being prepared on the proper use of medical x-rays at federal facilities, and on clean-up of land areas which have been contaminated by plutonium and other transuranic elements. Preliminary work is also underway for updating federal guidance for occupational exposure to radiation. Guidance to states on controlling exposure from radon and uranium as a result of mining and processing of minerals such as phosphate and uranium ore is being prepared.

In the area of technology assessment, EPA performs independent environmental analyses of radiation technologies being used or proposed by other federal agencies. The high temperature gas reactor, which utilizes the thorium fuel cycle to produce electricity and the liquid metal fast breeder reactor, which employs the plutonium fuel cycle, are examples of the technology assessment function. In these studies we evaluate the probabilities and potential consequences of accidental release of radioactive material. This work augments our guidance to the states on emergency response planning. EPA also carries on longer range studies such as evaluation of land burial techniques to dispose of low- and high-level radioactive wastes.

The radiation surveillance function performed by EPA provides an independent assessment of the overall condition of the radiological quality of the environment. An air monitoring network of 19 continuously operating samplers measures ambient radioactivity. This network is expanded to 74 sites when unusual releases of radioactivity is suspected or occurs. Other specific air monitoring activities are carried on to measure ambient trends of radionuclides which may be released in the production of nuclear power.

Water analysis and sampling programs are carried on to measure levels of tritium and other radionuclides near specific radioactive material sources and sources of drinking water. This monitoring information is used for the computation of population radiation exposure on the basis of data on specific radionuclides released from different sources.

Research, development

The EPA research and development program is designed to produce the scientific information and technical tools on which to base guidelines, standards and strategies to control environmental pollution. The major thrusts of the program are in air and water pollution research, with a strong emphasis on the acceleration of energy related environmental research. There are also significant programs dealing with such specific environmental

SPECIAL SECTION

problems as solid wastes, pesticides, and toxic substances.

The research activities in each of these programs encompass the determination of the health, ecological, and economic effects of pollutants, the identification and characterization of pollutant sources, the study of transport, transformation and ultimate disposition of pollutants in the environment, and the development of economical means of controlling pollutant discharges. Improved sampling, analytical, data handling, and quality assurance methodologies for pollutant measurement and monitoring are being developed as are new and improved technologies for pollution control and resource recovery.

As part of our responsibility for setting standards and guidance to protect public health and welfare, our health and ecological effects program plays a major role. This program provides the information for establishing and reevaluating water and air quality criteria, pesticide registration guidelines, effluent standards for toxic and hazardous materials, and radiation standards.

Within our health effects area, both long and short term studies are carried out to determine the effects from exposure to pesticides, radiation, criteria and non-criteria pollutants, and pollutants associated with mobile sources. We are identifying health hazards associated with drinking water contaminants, the treatment and disposal of wastewaters and sludge on land as well as pathogen concentrations for marine recreational waters. We have begun a research effort in environmental carcinogens which will focus primarily on quantitative assessments of environmental levels and risk factors associated with carcinogens.

The ecological effects research program is responsible for determining the effects of air and water pollutants on the structure and function of marine and estuarine ecosystems and their sub-components. Research is directed towards characterization and assessment of the impact of ocean disposal practices on both ecosystems. In addition, we are conducting research on the effects of pesticides and toxic substances on the ecosystem.

In the area of developing and assessing alternative solutions, our technology research program plays a key role. In the past, this program has been instrumental in developing the industrial technology to support legislatively mandated standards, such as the best practicable technology and best available technology effluent guidelines required by the water pollution control act of 1972, as well as the New Source Performance Standards required by the Clean Air Act.

Several effluent guidelines have, as their bases, technologies developed specifically through this

program in cooperation with industry. To supplement these continuing activities, the Office of Research and Development recently initiated efforts to strengthen the renewable resource research activities conducted in this program. Hopefully, these actions will provide us with information needed for the development of improved management approaches and alternative solutions to many non-point sources of water pollution problems.

Another area is our energy research program which is part of the National Energy Program. There the development and assessment of alternative solutions is receiving particular attention. Through this research, we have the opportunity to assess problems in advance or, at least, in parallel with energy development activities. We believe that if the consequences of energy activities can be identified and assessed, then practical control measures can be developed prior to full-scale development. Using this approach, the development of new energy sources should be able to proceed in a timely manner and in concert with environmental goals.

Finally, in the area of monitoring for progress toward objectives, we are relying on our research program to provide us with both the analytical techniques to physically measure the status of the environment and the management methodologies needed to analyze the effectiveness of our actions.

We are well aware that environmental data must be generated by using the best techniques available and that we must process this data in a manner which will allow us to make the best possible decisions. Accordingly, we have given our quality assurance program a high priority within our total research and development program. We are hopeful that efforts in this area and others will enable us to have a better understanding of the status of the environment, and will allow us to make corrective actions necessary to improve the operation of our programs.

Additional public protection authority

Although we have made substantial progress in cleaning up our environment, there remains a serious gap in EPA's regulatory authority which would further reduce the risks to public health and welfare. This gap involves regulating the entry of chemical contaminants into the environment.

I do not believe it is necessary to discuss at great length the serious damage to humans and wildlife caused by such chemicals as polychlorinated biphenyls (PCBs), vinyl chloride, and kepone. These chemicals represent only three of more than 30,000 chemicals in actual commercial production. While only a relatively small portion of the chemicals may pose any serious health threats, only a few thousand have been tested for car-

SPECIAL SECTION

cinogenicity.

Furthermore, we do not know the type of chemicals or the quantity actually entering our environment. These facts when viewed in light of World Health Organization estimates that between 60 and 90 per cent of all cancers are environmentally related, engender a great deal of concern, particularly on the part of those charged with the responsibility of protecting the public health and welfare.

As you are aware, various proposals are now pending before the Congress which would give EPA the authority to regulate the entry of toxic chemicals into the environment. The legislation before Congress would authorize EPA to gather better information about the health and ecological effects, the distribution and uses, the kinds and levels of exposure, of both known and new chemicals.

In addition, hazards and harm to human health and the environment from chemicals could be prevented prior to major investment in production and distribution. The legislation would enable us to balance the various costs, risks and benefits before deciding whether, or under what conditions, a potentially hazardous chemical should be introduced into the environment.

For the reasons outlined above, we would strongly urge the enactment of effective toxic substances legislation as an essential addition to our current regulatory authority.

Public, consumer participation in regulatory process

The Environmental Protection Agency consults both formally and informally with a wide variety of persons, firms and other organizations during the development of proposed regulations. This policy is maintained to insure that all relevant information including environmental and societal impacts of alternative regulatory strategies is fully considered in the regulatory process. Formal consultation is provided through advisory committees through formal requests for comments published in the "Federal Register" as advanced notices of proposed rule-making and notices of proposed rule-making and through formal public hearings on selected regulatory actions.

In addition to these formal committee contacts, EPA staff consults extensively with environmentalists, representatives of the affected industries, and other professional experts during the development of regulations. EPA professional staff members and contractor personnel travel to various facilities for purposes of inspecting and evaluating pollution control equipment, process technology and other factors which would affect the

levels of proposed standards.

In December 1974, EPA instituted new procedures for the development of standards and regulations. These new procedures were needed in order to improve the regulatory developmental process. One such improvement was directed at encouraging broader public participation in the process. The process to be employed is designed to insure wide agency participation and meaningful consultation with affected parties, representatives of State and local governments, and interested members of the public.

Consultation with appropriate congressional committees is also an important feature of the process. Although such wide consultation adds time to the developmental process, it also helps assure the quality of the resulting standards and regulations.

The policy of encouraging widespread public participation during the developmental process is accomplished through periodic meetings with those organizations and individuals interested in that specific regulatory package. Depending upon the complexity of the standards or regulation, such meetings may be held as soon as a working group, responsible for the development of the regulation, is established. Other points in the process for meeting with interested parties follow completion of an interim report, about half way through the process, and during the period that the proposed standard or regulation is available for public comment. These meetings are in addition to the statutorily mandated comment periods following publication of rule-making related material in the "Federal Register".

Development of EPA's Interim Primary Drinking Water regulations provides an excellent example of how our regulations are prepared. These regulations were established under the Safe Drinking Water Act which directed EPA to develop primary and secondary drinking water regulations. Under this Act, major responsibilities for enforcing EPA regulations is with the states. Due to this state responsibility, representatives of state agencies were included as members of work groups created for the purpose of developing the regulations.

Throughout the process of developing the regulations, EPA received recommendations from the National Drinking Water Advisory Council. The council was created as a part of the Safe Drinking Water Act, and it is composed of representatives from environmental groups, consumer groups, state agencies, and private industry.

In formulating its recommendations, the council held numerous meetings and actively sought the participation and advice of industry, public interest groups, and other governmental agencies. In addition to the council's input, prior to

SPECIAL SECTION

publication of the regulations in the "Federal Register," the Agency held a meeting with concerned environmental groups to explain the proposed regulations, and to discuss EPA's current thinking on other related issues. Since the promulgation of the regulations, we have held numerous meetings with state representatives to discuss their implementation and enforcement programs.

I do not want to leave the impression that all of our regulations have been developed with as much public participation and dialogue. I would like to state, however, that development of our Interim Primary Drinking Water regulations serves as a model for the Agency's future regulatory development.

Deregulation or revised regulation

It should be understood that EPA is different from traditional regulatory agencies such as the Interstate Commerce or Federal Power Commissions which regulate the rates and operations of specific industries. EPA was established not to oversee the business operations of an industry, but to make certain that industry, in general, operates in the public interest by insuring that the market increasingly takes into account environmental costs that it would otherwise exclude from its calculations. Left unregulated in a highly advanced industrial society, all the normal economic incentives of a competitive, free enterprise system work to encourage the disposal of vast volumes of wastes into the environment, at the rapidly increasing expense of the public health and welfare.

Regulation is required to internalize this expense, thus utilizing the free market system to achieve pollution abatement with greatest efficiency and at least cost. (The only alternative, or effective supplement, to such regulation would be a system of effluent and emission charges, and there has been little or no movement in this direction.) In the area of environmental protection, therefore, there can be no question of "deregulation." What must always open to examination, however, is the efficiency and effectiveness of specific regulatory

approaches and timetables and the accuracy and adequacy of the scientific data upon which regulations are based.

To this end, in the latter part of 1975, we took steps to improve the quality of our regulations. We instituted a revised internal procedure for developing regulations a review of all regulations under consideration and a new requirement that all proposals for new standards and regulations receive approval by the Office of the Administrator prior to development.

There are a number of reasons for these changes in procedure and policy. First, in the past some of our regulations have been overly complex and burdensome. This is due, in part, to the very technical nature of the pollution control field. At the same time, however, it has been difficult for the affected industry and members of the public to understand and implement and/or comment on certain regulations. Therefore, to the extent possible, we are attempting to simplify the language of our regulations.

Second, due to the inter-related nature of EPA's mission (e.g., cleaning the air has water pollution and solid waste disposal ramifications) a regulation under development within one program office in the Agency may overlap or duplicate the efforts of another regulation. Thus, we reviewed all of our regulations under development in order to eliminate those we believed unnecessary due to their overlapping nature.

Third, through the review and the addition of a requirement that all regulatory proposals receive approval by the Office of the Administrator prior to development, we have been able to focus management level attention at an earlier point in the process. This attention will help insure that our regulations are reasonable and well-grounded on scientific data.

As a result of our review of some 125 regulatory initiatives, 20-25 were either deferred, dropped, or proposed in a different form in accord with the reasons discussed above. An additional beneficial result has been our ability to focus limited resources in the most efficient and effective manner.

Sewage treatment plants crying for smart operators

BY MATT RACKI

EPA is taking vigorous steps to protect the mammoth \$18 billion sewage treatment plant construction grant program which it oversees.

Authorized under the 1972 Federal Water Pollution Control Act, the money will help states and municipalities build up their

sewage treatment facilities to meet water quality goals. All of the \$18 billion is due to be allotted by September 1977.

One of the steps being implemented by the Agency is an upgrading of the training given sewage treatment plant operators. That's vital because the field suffers such a high turnover rate. As Gene Chaiken, deputy chief of

the Region V Construction Grants Branch, said, "The pay isn't usually all that great, especially in smaller communities, and it's hardly what you could call a glamorous field."

What it all boils down to is that there is a fair number of sewage treatment plant operators around the nation who aren't as qualified to be holding their positions as they could be.

And what that means to the residents of the municipality employing him is that a flip of the wrong switch or misreading of a dial or panel light could see the city's water quality go right down the drain, so to speak.

It doesn't happen every day, of course, or even every month, but it has happened before and no doubt will again.

Training is the key to making sure it happens as little as possible, and in Illinois, for example, that involves "Project Optimize." It was discussed at length in the December-January Environment Midwest; part of it dealt with the training of 24 operators who in turn would teach more operators and so forth.

Says Chet Shura, Region V chief of the Manpower Development Branch, "Most of the training centers around upgrading persons already in the sewage treatment field. There are a lot of plants in the Midwest that can get by with a generalist—a laborer, truck driver or grit remover, for instance—but the bigger plants must have better trained people."

That is one reason the Environmental Research Training Center is currently under construction in Edwardsville, Ill. Eventually, Shura said, it will be a focal point for determining training needs, developing curricula and study materials.



Operator trainee Ron Johnson changes one of the charts showing the amount of raw sewage flowing into the Downers Grove plant.

"The goal is to build a network of colleges throughout the state to train operators," he added. And as far as Shura is aware, the ERTC and its whole concept is unique to the entire country.

Once an operator has "finished" his training (it really never is finished, owing to the continuing development of more and more sophisticated sewage treatment equipment) he might stay in the field long enough to gain a position like that of Ralph Smith.

Smith is plant superintendent at the Downers Grove (Ill.) Sanitary District, situated about 25 miles west of the Chicago Loop and serving about 60,000 people.

If there is an "average" sewage treatment plant operator, Smith admits he's probably it. He had earned an accounting degree while in college, but had always had more than just a passing acquaintance with math and the sciences.

"I had a friend who was a sanitary engineer who told me of an opening up in Crystal Lake (about halfway between Chicago and the Wisconsin state line) so I decided to take it. I guess it was because of my interest in science and the fact I thought it would be a challenge."

Ralph spent about two and a half years in Crystal Lake as a chemist, doing tests on drinking water before moving to Downers Grove about 13 months ago. He

recalls that his training, while much of it was the on-the-job variety, also involved a series of seminars covering such items as safety, pump maintenance and electricity.

"We were given a test, of sorts, but it wasn't graded. It was really an opportunity for you to find out how much you knew or still needed to know about the sewage treatment plant field.

"I understand that in Illinois at least, operator certification involves a five-part written test. You must get at least 70 on each section to gain certification as a Class I operator. The sections dwell on things like math, collection systems, maintenance, and safety/laboratory techniques.

I imagine the tests and the category of operators probably varies somewhat from state to state in Region V, but the same basic knowledge is pretty much required for each corresponding category."

The basic "ladder of success" in the field is from operator trainee up through the steps of operator, shift operator, assistant superintendent through superintendent, said Smith, although different states might assign a different title to some of the slots.

In his position, Smith oversees a facility that can handle 9.6 million gallons of sewage a day at a 95 percent removal rate. The district is also responsible for

nine lift stations and about 180 miles of sewer lines in Downers Grove and the immediately surrounding area.

There are a lot of headaches involved in the care and feeding of a sewage treatment plant, both physical and otherwise. Smith, concerned primarily with the physical, says that, "Part of the problem is integrating the old with the new. We just put into operation about six months ago a \$5.6 million expansion that doubles our capacity and includes one of the finest tertiary systems in the country.

"We're still in the process of getting the bugs out, no pun intended, keeping the old system going and coordinating the new system with it. The original plant was built 20 years ago and technology has come a long way since then," Smith added.

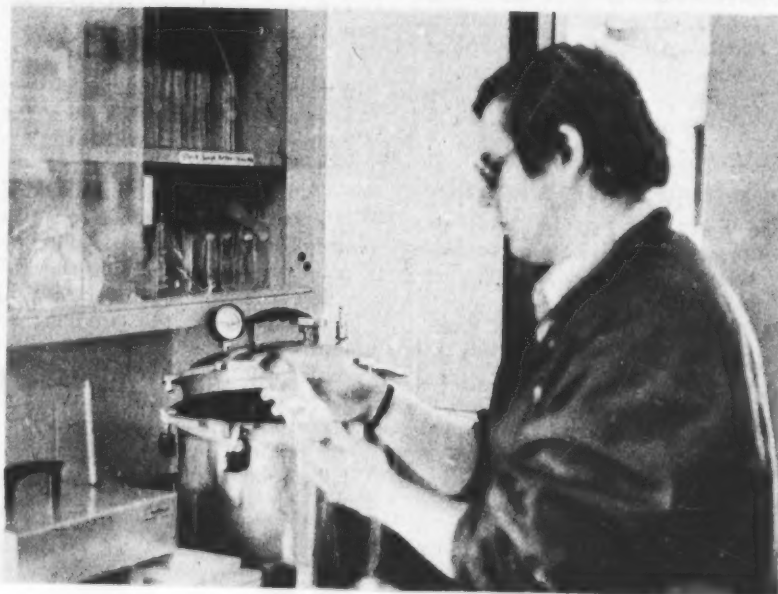
In a sense, that tends to frighten away a lot of newcomers to the field, says Smith. He notes that when he was at Crystal Lake, the turnover rate was very high and that applicants for operator positions weren't exactly breaking down the gates.

Part of it is the pay, he says. The average salary for an unskilled operator is from \$3-\$4 per hour. Starvation wages they're not, but they aren't that high, either. Someone who sticks around and moves up can eventually make from \$8-10,000 a year as a Class I operator and around \$15-20,000 per year as a superintendent.

One of the technical problems Smith and operators like him face just about everywhere is that of storm water from heavy rains getting into the system. It's been a longstanding headache and, in the case of Downers Grove, will take another several years to work out.

But he definitely has no plans to give up the sewage treatment field for an accountant's ledgers. He admits he may not stay forever in Downers Grove, but will remain in the business as long as he can find and meet another challenge.

"And that should keep me busy for a long time," Smith said.



Ralph Smith runs a fecal coliform check in the bacteriological room.

ONCE OVER LIGHTLY



EPA issues guide for construction grant audits

A guide for audit of construction grant projects has been published by EPA headquarters. Developed by the Agency's Office of Audit, the guide is intended for use by auditors and certified public accounting firms under EPA contract in auditing grant funds spent in the planning, design and construction of wastewater treatment plants throughout the U.S.

Copies of the guide are available in single or limited quantities from the EPA Public Information Center (PM215), Washington, D.C. 20460.



EPA posts final regs for ferroalloy facilities

Final air pollution control regulations for new and modified ferroalloy production facilities were recently issued by EPA. Companies who operate electric submerged arc furnaces where construction or modification was started after Oct. 21, 1974 are subject to the new regs.

The facilities produce high-silicon, chrome and manganese alloys used in making all types of steel. The new standards require 99.9 per cent control of particulate matter.

Indiana APC Board cancels exemption

An exemption allowing a 15-minute air pollution violation period every 24 hours was removed from regulation APC-3

(visible emissions) by the Indiana Air Pollution Control Board at a recent meeting.

The exemption, unacceptable by U.S. EPA standards, had threatened future federal funding of state and local air pollution control programs. The board has scheduled a public hearing to review the proposed air pollution control regulation changes on June 17, but time and location were not available at presstime.



Michigan cracking down on "ORV" law June 1

Michigan's new "ORV" law, which provides for the registration and regulation of off-road recreation vehicles, will be strictly enforced beginning June 1, according to George M. Dahl, head of law enforcement for the Department of Natural Resources. He says his officers after that date will be especially watchful for violators, subject to a \$100 fine and 90 days in jail.

He added that operators should remember that a landowner's permission is required to drive ORVs on private property, and that operators are liable for damages to private lands, including that done to trees, shrubs, crops and animals.

Michigan bottle bill getting strong support

A petition drive is in full swing to place the Michigan bottle bill on the ballot in the November general election.

According to William Rustem, who is heading the drive, more than 68,000 petitions with spaces for 15 signatures each have been mailed in response to interest expressed by Michigan residents. The bill would require a refund-

able deposit on soft drink and beer containers, and would prohibit nonreturnable soft drink and beer containers and pull-tab cans.

Tom Washington, executive director of the Michigan United Conservation Clubs, spearheading the drive, said 212,000 signatures had to be collected from registered voters by June 1 in order for the bill to appear on the November ballot.

Farmers warned about phony weed control ploy

State agriculture departments and the U.S. EPA have received numerous complaints from farmers and other consumers who say they have been telephoned by salespersons making false or misleading claims for some weed control products.

The claims say that the products (2,4-D, bromacil, pentachlorophenol, pramitol and diquat dibromide) are non-toxic to people, livestock and fish; that they will control all weeds when in fact they will only control some; they can be used on crops or pastures when actually they may damage or destroy these areas; and that they will curb all weeds for up to three years.

All of the products are legitimate weed control agents, according to EPA, but they may be ineffective or illegal for the uses being claimed.

Farmers are being urged to help stop the telephone sales racket by keeping an accurate record of such calls, including date of the call, caller's name, his company, his phone number, the product, the manufacturer, and the EPA registration number if the product has one. Such calls should be reported immediately to a local agricultural agency or one of EPA's 10 regional offices.



Survey finds asbestos in metropolitan waters

Initial results of a two-year survey conducted by EPA show that measurable amounts of asbestos fibers have been found in some samples of treated and untreated water in Boston, Philadelphia, Atlanta, San Francisco and Seattle.

The findings are the result of analyses of the drinking water of 10 cities. Chicago, the only city in Region V whose water supply was tested, showed no asbestos. Neither did that of Denver, Dallas, Kansas City or New York City.

However, said Dr. Andrew Breidenbach, assistant administrator for water and hazardous materials, "The results are varied and inconclusive due to the limited amount of sampling in

any specific location and the nature of the measurement techniques available for asbestos detection."

DNR gives Dow credit for river improvement

Dramatic improvement in the water of Michigan's Tittabawassee River is the direct result of a 10-year expansion program of the Dow Chemical Company's waste treatment facilities at Midland, according to water quality officials of the Department of Natural Resources.

DNR biologists who made recent surveys of the river's quality and aquatic life say that a \$3.5 million, 220-acre wastewater treatment lagoon completed by Dow in late 1974 had a major impact on the river last year.

Over the past few years, the biologists say, the Tittabawassee has enjoyed a 50 per cent reduction in oxygen-consuming wastes, a 75 per cent reduction in

phenols, a 90 per cent drop in the heat load in Dow wastewater discharges, a 70 per cent reduction in water used by the plant and a 50 per cent reduction in treatment system discharge.

Agency gives contracts for wastewater studies

EPA has awarded more than \$1.8 million for four research contracts to study long-term effects of applying municipal wastewater to land areas. Among other things, results of the study will be used to determine the feasibility of using the wastewater-treated land for growing crops suitable for human consumption.

Research will concentrate on the long-term effects of wastewater on the land, such as the possible build-up of bacteria, viruses and heavy metals in the soil, and whether a public danger is posed by growing edible crops in areas where such materials might accumulate.

FEDERAL REGISTER

APRIL 19

Rules

Air quality implementation plan; various States, etc.:
Clarifying amendments; Connecticut, New Hampshire, Rhode Island, Vermont

Florida

Pesticide chemical in or on raw agricultural commodities; tolerances and exemptions, etc.:

Terboufos

Notices

Pesticide chemicals, etc.; petitions:
Chapman Chemical Co., et al

APRIL 20

Notices

Kepone; presumption against registration and continued registration; extension or rebuttal period
Pesticide applicator certification; State plans:

Idaho

Pesticide registration:

Applications

Pesticides, specific exemptions and experimental use permits:

Forest Service, U.S., acephate on forested areas

Forest Service, U.S., carbaryl on forested areas

Forest Service, U.S. Dimethyl phosphonate on forested areas

Rohm & Haas Co., 2-chloro-1 benzene on soybeans

Rohm & Haas Co., 4-butyl-4H-1, 2, 4 triazole on wheat

Shell Chemical Co., Certain herbicide on soybeans

APRIL 21

Proposed Rules

Air quality implementation plans:

South Dakota

Notices

Pesticide registration:
Applications (7 documents)

APRIL 22

(No Listings)

APRIL 23

Rules

Air quality implementation plans; various states, etc.:
New Jersey

Oregon

Waste, solid; treatment, management, etc.:

Disposal system

Proposed Rules

Air quality implementation plans, various States, etc.:
New Jersey

Notices

Pesticide applicator certification; State plans:

Virginia

Pesticides, specific exemptions and experimental use permits:

Mobil Chemical Co.; correction

Oregon State University

Pesticide petition:

Rohm and Haas Co

Hearings, etc.:

Wisconsin Air Quality Implementation Plan; canceled

APRIL 26

Rules

Water pollution; effluent guidelines for certain point source categories:

Cooling water intake structures

Notices

Guam, northern groundwater system; request for EPA determination on aquifers

APRIL 27

Rules

Authority delegation for standards of performance for new stationary sources:

South Dakota

Program grants, annual allotments of appropriated sums

Notices

Air quality implementation plans; various States, etc:

South Dakota

Environmental statements; reviewed and commented; availability

Meetings:

Administrator's Pesticide Policy Advisory Committee

National Air Pollution Control Techniques Advisory Committee

Water pollution; discharge of pollutants:

New Mexico

Water quality; underground inspection control, States requiring programs under Safe Drinking Water Act; future determinations

APRIL 28

Rules

Noise emission controls, medium and heavy trucks

APRIL 29

Rules

Toxic Pollutants; effluent standards

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc. (2 documents)

Notices

Meetings:

Science Advisory Board, Executive Committee
State-Federal FIFRA Implementation Advisory Committee, Enforcement Working Group

Pesticide registration:

Applications

Pesticides; specific exemptions and experimental use permits:

Abbott Laboratories

Mobay Chemical Corp

Pfizer Inc

APRIL 30

Rules

Air quality implementation plans, various States:

New Mexico, correction

Pennsylvania

Philadelphia, metropolitan area

Mass transit priority incentives for States:

New Jersey

Proposed Rules

Ocean dumping; proposed designation of site

Notices

Pesticide chemicals, etc.; petitions:

Ciba-Geigy Corp

Elanco Products Co

PPG Industries, Inc

Rhodia, Inc

Pesticide registration:

Applications (4 documents)

Pesticides, specific exemptions and experimental use permits:

Diamond Shamrock Corp

Stauffer Chemical Co

MAY 3

Rules

Maintenance of National ambient air quality standards

* U.S. Government Printing Office: 1976 - 650-516 P.O.: NO. 9/Regional V-1.

ENVIRONMENT MIDWEST
ENVIRONMENTAL PROTECTION AGENCY

Office of Public Affairs

230 South Dearborn

Chicago, Illinois 60604

THIRD CLASS

POSTAGE AND FEES PAID
ENVIRONMENTAL PROTECTION AGENCY

EPA-335



Return this sheet if you do NOT wish to receive this material, or if a change of address is needed. (Indicate change, including zip code.)



Environment Midwest

REGION V
UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY

JULY 1976

Special Issue:
**How The
Environment
Affects
Our Health**

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

What it's all about
Page 3

Life at the 'Triangle'
Page 4

A case of public health
Page 7

Heaven help the ear
Page 10

Diseases then and now
Page 13

Hazards of wastes
Page 16

Caution required here
Page 18

Struggle for survival
Page 21



Readers say what is on their mind

Response to my April column asking readers to "let me hear from you" certainly has been gratifying. The letters have helped me get a clearer picture of the issues and ideas people in Region V are concerned about. Another heartening note is the letters' diversity—they've come from four different states in the region from people in various walks of life.

For instance, Scott Bailey, a professional engineer from Midland, Mich., not only wrote, but enclosed a copy of an article in an engineering magazine. The story was in general agreement with my May column that while much has been done in the field of pollution cleanup and abatement, much remains to be accomplished.

David Hoglund, Mount Prospect, Ill., expressed concern that my statement in the April issue that, "...at the same time, this nation and region are starting to recover from an energy crisis. ..." might imply that the energy crisis was over. His view was that the crisis was not over, that it continues to exist.

A lengthy letter came from William A. Parsons, director of corporate environmental services for a Cleveland engineering firm. He expressed several opinions about the agency, most dealing with pollution abatement guidelines, permit program and enforcement. Parsons closed his letter with an appeal that, "The guideline development-permitting-enforcement sequence be interrupted by a review and reconsideration operation between permitting and enforcement."

Another piece of mail came from Cari Backes of Milwaukee, vice president of an environmental group known as "Friends of Havenwood, Inc." She and other Milwaukeeans are attempting to establish an environmental education and awareness center on federal surplus land in the northwest part of the city. Having met with some opposition from the land's current owners, she wrote asking for suggestions as to how her group could best proceed.

I welcome these letters and reiterate that I am here to listen.



GEORGE R. ALEXANDER JR.

Environment Midwest is a monthly newsletter published by the Public Affairs Office, Region V EPA, 230 S. Dearborn, Chicago, Ill. 60604.

George R. Alexander, Jr. Administrator
Valdas Adamkus Deputy Administrator
Frank Corrado Public Affairs Director
Matt Racki Editor

About this issue...

"The health of the people is really the foundation upon which all their happiness and all their powers as a State depend."—Benjamin Disraeli.

BY FRANK CORRADO

When he wrote his famous treatise on "Airs, Waters and Places," Hippocrates told his young physicians to be mindful, when visiting a new city, of the air, the soils and the waters of the place because attention to these details was an indicator of good health.

This advice has served us well and still applies today. With the great emphasis that has been placed on individual health care in the last 30 years, there has been some serious neglect of *public* health. And that is what environmental problems are really all about.

There literally would be no environmental movement, no EPAs, no anti-pollution crusades at all if it were not for the basic fact that bad air, bad water and fouled land are harmful to people's well being.

The name of the game in environmental regulation is to determine just how much "health" the society can pay for. For many years—until the early 1970s—there were few controls on air and water, and public health was secondary to free use of the environment for industrial development. Clean air and water laws are the result of a public decision in this country to improve our biological support systems. The Clean Air Act of 1970 and the Water Pollution Control Amendments of 1972 represent a national commitment to improving public health.

Since these laws were passed, much debate has arisen in the business, engineering, governmental and scientific communities as to how much cleanup is sufficient, at what level of pollution can somebody say with any certainty that no health risk exists.

The relation between the amount of pollution and its direct impact on public health remains extremely controversial. This is seen in the interaction between the man of science and the political decisionmaker. The latter wants to know, "What does it all mean?", and the man of science frankly admits he doesn't really know, that the "technical uncertainty" is high.

All living organisms exist within a dynamic structure. The physiology of man is constantly changing. And even between men and man, at any one time there are so many variables, so many changes, so many factors, that any laws we pass, and regulations or standards we develop must constantly be tested.

In an article in *Science* magazine, Harvey Brook and Eugene Skolnikoff state that, "Basic researchers and academic scientists have a professional bias which assumes that if only the facts and understanding are made available, society will automatically appreciate their implications and act accordingly."

As they go on to point out, this is not really so, and that when many studies or advisory reports are translated into political terms, they don't work.

"The issues on which advice is sought at higher levels of government are almost always ones in which technical

uncertainty is high, important evidence is lacking, and associated nontechnical issues are contentious and critical.

"Judgment on both technical and nontechnical issues and on their interaction is thus required: a logically reasoned single answer is not possible. Judgment is necessarily affected by biases, policy preferences, ignorance, differing estimates of the nontechnical factors, and other vagaries. There is nothing wrong with this; it is unavoidable," say Brooks and Skolnikoff.

Top public health figures try to balance the potential health threat with the potential cost. There are numerous examples. Cyclamates were one. Another was use of NTA as a substitute for phosphates in detergents. The potential impact of sulfuric acid emissions from catalytic converters on autos was another.

This past spring, EPA granted water pollution cleanup relief to steel industries in Ohio's Mahoning Valley because of economic realities. But at the same time, the agency gave no relief on air pollution from those same industries and set dates for a minimum level of cleanup of water so that the water supply of downstream communities will be protected in the future.

Additionally, a decision to ban DDT, chlordane and heptachlor by EPA were other instances where the economic impact had to be weighed against public health concerns.

In some of these cases, EPA has been challenged in the courts, as in the case of the agency's ruling against leaded gas or on its requirements for auto inspection and maintenance programs at the local level. A major debate over the cost of meeting federal health standards for sulfur dioxide by coal-burning power plants continues. And concerns over the technical base of air pollution standards continue to be raised by the business community.

In this issue of *Environment Midwest*, we will be looking at a number of health issues as they affect EPA programs. We will look at the clean air standards, at toxic and hazardous substances, health aspects of pesticide control, and carcinogens in the environment. We also will see how one research facility, the University of Illinois School of Public Health, is working on public health concerns.

Rene Dubos, the famous microbiologist, has written that, "Crowding, regimented life, environmental pollution and disturbances of the fundamental biological rhythms are aspects of life which are common to all highly technicized and urbanized societies," and that they produce "diseases of civilization." Man, he goes on, can adapt to any number of environmental insults.

But the question is, should he? And can he?

RTP-environmental "OK Corral"

The "gunfights" are scientific and the faint-hearted need not apply.

BY FRANK CORRADO

The rules are strict. The deck is stacked. The stakes are incredibly high. If you're successful, only your survivors will know about it. You'll be long gone by then.

Want in on this game? Then become a national health researcher on environmental pollution. It's one of the toughest games in town, but environmentally it is *the* game, the high stakes game.

The gambles are Faustian—will we take some risk with public health that will endanger tomorrow's child? Will we hurt our future economic growth because some laboratory animals got sick from a heavy dose of a chemical substance and somebody panicked?

"Questions involving the environment are particularly prone to uncertainty," said Judge J. Skelly Wright in a majority appeals court opinion upholding EPA's regulation requiring the phaseout of the use of tetraethyl lead in gas as a potential health hazard. "Technological man has altered his world in ways never before experienced or anticipated. The health effects of such alterations are often unknown, sometimes unknowable."

And he added, "Reasonable medical concerns and theory long precede certainty."

On the other hand, critics contend that carbon monoxide is not so dangerous to human health in the ambient air; that as a matter of fact all the national air standards really exaggerate the problem; and that the benefit of new chemical compounds and pesticides outweigh many of their environmental or health costs.

But more and more, environmental factors are becoming suspects in the cause of deaths in America. In an area known as Research Triangle Park (RTP) in the Raleigh-Durham-Chapel Hill area of North Carolina, 350 employees of the U.S. EPA are looking directly into the health impact of pollution.

Other EPA labs throughout the country are investigating ecological effects and new methods of cleanup, but in RTP the medical impact of pollution is the primary focus.

The impact of air, pesticides, toxic substances and radiation are primarily



Dr. Edward Haak and the test chamber at Research Triangle Park used to measure the impact of low pollution levels on humans.

emphasized. Research on water medical effects, for instance, is carried out mainly in Cincinnati. Half the work at RTP involves animal studies, but there is much clinical, population study, environmental toxicology and experimental biology going on as well.

Medical experts at RTP are presently gearing up to look very closely at how people are affected by air pollution. In the Clinical Studies Division, Dr. Edward Haak and his associates are working on part of a three-phase human studies project.

One phase is called CLEANS, and involves building a large laboratory

where humans can be exposed to small doses of pollutants over periods of time ranging from upwards of two weeks and longer.

A second phase—CLEVER—consists of building a mobile testing van, similar to the old chest x-ray units, only much more sophisticated, that can enter high pollution areas and measure heart-lung function.

The third phase is CHAMP, a mobile air testing van which takes computer controlled readings and sends them by telephone back to North Carolina. There are also stationary CHAMP

facilities that are now in place in several cities around the U.S. The stationary facility, along with the mobile vans, will give researchers a better profile of how pollutants vary in a given area.

Whether it's air pollutants, toxic substances, pesticides or radiation, the main "guinea pigs" for the researchers are guinea pigs, rats, mice, rabbits and monkeys.

"It's not perfect, but else can we do?" says Dr. Lee McCabe, who is looking at the effects of asbestos in water and the catalytic converter on rats in Cincinnati.

John Knelson, MD, who heads the entire EPA health effects program in RTP, agrees.

"The translation between animals and humans leaves a lot to be desired, but it is the keystone for establishing the relationship between environmental factors and health status, and the keystone for new drugs and surgical procedures.

"At present," he continued, "there are many parallels between what EPA does and how the drug industry works—the testing is the same. We have to look at the chemical or suspected pollutant in the lab and assess its effects on test animals before giving it an okay."

The anticipated passage of a toxic substances act soon has EPA and industry researchers rushing to come up with more rapid tests for cancerous side effects. At present, such tests take up to

three years and cost up to \$100,000 per chemical.

However, according to a recent report in *Science* magazine, the "Ames" test—using bacteria to tell whether a chemical has possible carcinogenic impacts—is being considered, along with other "short" tests as a way of quickly assessing the safety of new chemical products before they come on the market.

"We need faster tests for chronic long-term effects," says Dr. Bill Durham, chief of EPA's Environmental Toxicology Division at RTP.

Additionally, there is greater emphasis by EPA now on using monkeys for more and more testing because of the similarities of their health defense mechanisms with man's.

Here is an assessment of what is going on and what is in store for the future as health researchers see it.

THE CLEAN AIR STANDARDS—

The ambient air quality standards are one of four ways outlined by the Clean Air Act for controlling pollution. The others are controls on hazardous pollutants (such as vinyl chloride), performance standards for construction or modification of certain industrial operations and control of mobile emissions, such as lead.

"When standards were first promulgated, some people thought there was a great deal of information lacking," says Gory Love, the retiring chief of

EPA's population studies division at RTP.

"But since then, subsequent investigations have proved to support the original clean air standards much more strongly than even those people turning them out thought. More recent studies have suggested that at levels close to the standards there is very little in the way of increased adverse effects. These studies have not indicated that the standards should be relaxed, however."

CARBON MONOXIDE—

Dr. Knelson says that, "We have our best data base." Dr. Haak, whose division has run a number of CO tests, agrees. "We're fairly sure about CO. As a matter of fact, we've been able to show some decrease in cardiac reserve even in young people in the range of 3 to 5 per cent CO in the blood. Almost nobody argues that this pollutant has a direct impact on the heart."

HYDROCARBONS/OXIDANTS—

The hydrocarbon/oxidant standard is not based on health effects, but on its contribution to the formation of oxidants. Ozone is taken as the representative compound for the complex photochemical "smog" mixture.

PARTICULATES—A broad-based standard that needs to be refined further. Data presented by EPA recently at a national meeting of the Air Pollution Control Association shows that the fine particles—the last 4 to 5 per cent removed from the smokestack—are probably the most dangerous to human health since the body can pretty well expel the others.

"All the standards are as valid now as the day they were promulgated," says Dr. Knelson. Down the road, he sees a number of priorities for clean air standards:

1. A sulfate standard. "We're just controlling sulfates at present by using the SO₂ and total suspended particulates. Industry is saying we're too strict. We're saying this is the only way to control sulfates. We need to come out with a sulfate standard as soon as we have enough data to do so," Dr. Knelson said.
2. A short term NO₂ standard. The EPA standard at present is based on an annual average which researchers say is not meaningful. To go along with this, Dr. Knelson says, we will need a nitrates standard similar to the sulfate standards.
3. Metals standard. First lead, then others.
4. Particulates. Scientists need to identify the polycyclic organic materials, or hydrocarbons, in this mix which are probably most hazardous to health, like benzopyrene, a cancer producing agent. Says Dr. Knelson, "The more materials we test for cancer, the more we find."



Dr. John Knelson heads the Research Triangle Park operation.

Scientists feel that the "mix" of pollutants, which they can't yet measure, is the real health concern; it's the synergism between the criteria pollutants and the other pollutants not now controlled.

Another, even more serious problem, says Love, is measuring the response of humans to the pollutant exposures. The air pollution standards assess the threshold level, but there is no one single threshold for everybody, he adds. Congress has mandated that EPA establish a threshold, based on air criteria documents—health studies of humans and animals. Love adds that, "There has to be a line drawn somewhere and Congress, by passage of the Clean Air Act, requires that the agency set a level to protect as many people as possible.

He went on to say, "Our epidemiological studies don't provide us with dose/response info relative to specific pollutants. We find the effect and then try to find out what caused it. In this way, we can only develop an association.

"We don't know whether clean air standards have eliminated health risks in the last five years. It will take five more years, at least, to go back and study what has happened as a result of cleanup," Love said.

PESTICIDES—Says EPA's Bill Durham, "We look at several things when a pesticide comes to us for registration—how effective is it, does it do the job; is it safe for humans and the environment, i.e., fish and wildlife? The manufacturer must provide this information. We recheck some of it for accuracy."

When EPA conducts animal research, it looks at both the impact of ingesting residues and also at the effects on skin

exposed to pesticides. Field studies to corroborate lab work are conducted in an apple-growing area in Washington state.

EPA moved in the past few years against a number of pesticides—DDT, aldrin, dieldrin, heptachlor, chlordane and others. Organo-phosphates, which are more dangerous but short-lived, have been used to replace those long-term, persistent types.

One of the more controversial pesticides, the weed and brush killer known as 2, 4, 5-T, is currently under investigation. There is much concern over an impurity called Dioxin, formed in the manufacture of 2, 4, 5-T and which is so toxic it is measured in parts per trillion.

There are about 46,000 pesticide products in the marketplace and each is supposed to be reevaluated every five years under the provisions of the Federal Insecticide, Fungicide and Rodenticide Act of 1972. EPA must check out 6,000 new applications each year. Right now, special reviews are being conducted on 102 chemicals, including 2, 4, 5-T, suspected of being carcinogenic.

RADIATION—According to Dr. William Kirk of the Experimental Biology Division, EPA is looking at the reproductive and nervous systems and at the cancer-producing possibilities of long-term, low-level exposures to ionizing radiation from power plants, medical uses, etc. Also under scrutiny are such sources as radio transmitters, microwave ovens and so forth. According to Dr. Kirk, the Soviet Union has set a standard for microwave exposure 1,000 times lower than the U.S. standard of 10 milliwatts per square centimeter. EPA is trying to find out why.

WATER—According to Lee McCabe of the Health Effects Research

Laboratory in Cincinnati, most serious concerns at present center around the use of chlorine to kill pathogens. In water, chlorine produces a byproduct—chloroform—found to be cancer-causing in lab test on animals.

"You just can't ban chlorination," says McCabe. "We have to make a tradeoff. EPA is trying to minimize the effect of chlorine by changing treatment techniques. Right now we just have to keep chlorinating to prevent water-borne disease."

Another critical concern, says McCabe, is finding out whether asbestos in water is cancer-producing. The Reserve Mining story has put new urgency into research. In addition, at least 10 large cities in the U.S. have high asbestos counts in their water supplies. Another area of research is whether hard water is healthier for people. Studies in this area are in progress.

In addition, EPA has launched a crash study of the health effects of 65 toxic chemicals. The agency will then set maximum pollutant standards for at least 21 major categories of industry for waste chemicals such as arsenic, asbestos, cadmium, chloroform, cyanide, lead, mercury and vinyl chloride.

THE FUTURE—"If you look across the board," says Dr. Knelson, "EPA has taken on a spectrum of responsibilities that has never occurred before in the country's history. All other regulatory agencies have a focused pervue compared to EPA. The agency has such a wide range of responsibilities."

Dr. Knelson added that, "We need a more orderly, systematic evaluation of cost-benefit factors for environmental pollution so we will have an idea of the level of control needed without undue environmental costs."

Dr. Knelson compares EPA to being a referee between competing needs in the society. "And who likes referees?" he asks. "You don't win popularity contests when you're dealing with issues that have billions of dollars at stake. You just can't avoid making controversial decisions."

"This is a pretty dull, footslogging business of identifying hazards and then coming up with sensible control strategies, but I'm amazed that with all the tough, controversial decisions we've made that we haven't stepped into more of it than we have."

Knelson, Haak and other EPA scientists see more and more tests coming in the future for effects of pollutants on reproduction, on the body's defense mechanisms and on the nervous system, in addition to current research, trying to learn the effects of the environment on the heart and lung functions.



Herman the hamster aids RTP research efforts in numerous ways.

The answers don't come easily

Illinois School of Public Health has all sorts of research irons in the fire.

BY MATT RACKI

It's temporarily housed in a former convent, although the Graduate College of the University of Illinois' School of Public Health is more devoted to the care of man's body than his soul.

The school was established in May 1970 and is the newest of about 20 graduate schools of public health in the U.S. It is also unusual in that it is divided into fewer areas of study than most of its counterparts.

But that hasn't kept its enrollment from growing like mad. It admitted its first class of 24 master's degree candidates in 1972 and has since graduated more than 125 students. Current enrollment is about 135 students, and the school presently offers doctoral as well as master's degree programs related to various disciplines and specialties in public health.

The school has been located in the former St. Mary's Convent since 1973 and within a year will be moving into 50,000 square feet of space in a new complex about a block away.

One of the most stressed disciplines at the ISPH is environmental health. The program is concerned with problems of air, water and food pollution; community hygiene; radiation; and consumer protection.

According to Dr. Paul Q. Peterson, dean of the school, "We're trying to determine and understand pollutants' effect on man's health."

Dr. Peterson, who has headed the ISPH since its inception, says that, "From such an understanding it is possible to recommend allowable human exposure levels and determine the most effective and efficient methods of pollution control."

Another part of the school's operation—occupational medicine and industrial hygiene—contains elements of internal medicine, dermatology, physical medicine, psychology and engineering. These factors are focused on man in his working environment, its safety, its toxic substances, its physical stresses and its psycho-social circumstances.

Says Dr. Peterson, "We look at man in his work environment and try to get a handle on what factors, particularly environmental ones, may prevent him from performing at his best."

The major area dealing with man and his environment is called, appropriately enough, the Environmental Health

Sciences Program. It is concerned with identifying, measuring, evaluating and controlling environmental health hazards.



Carolyn Hesse, one of many ISPH students involved in research, works with a low temperature plasma asher to determine the asbestos count in the sample she is inserting. The sample is bombarded with radio frequency waves that convert the oxygen to radical oxygen, eventually leaving only ashes and the asbestos.

The answers don't come easily

Illinois School of Public Health has all sorts of research irons in the fire.

BY MATT RACKI

It's temporarily housed in a former convent, although the Graduate College of the University of Illinois' School of Public Health is more devoted to the care of man's body than his soul.

The school was established in May 1970 and is the newest of about 20 graduate schools of public health in the U.S. It is also unusual in that it is divided into fewer areas of study than most of its counterparts.

But that hasn't kept its enrollment from growing like mad. It admitted its first class of 24 master's degree candidates in 1972 and has since graduated more than 125 students. Current enrollment is about 135 students, and the school presently offers doctoral as well as master's degree programs related to various disciplines and specialties in public health.

The school has been located in the former St. Mary's Convent since 1973 and within a year will be moving into 50,000 square feet of space in a new complex about a block away.

One of the most stressed disciplines at the ISPH is environmental health. The program is concerned with problems of air, water and food pollution; community hygiene; radiation; and consumer protection.

According to Dr. Paul Q. Peterson, dean of the school, "We're trying to determine and understand pollutants' effect on man's health."

Dr. Peterson, who has headed the ISPH since its inception, says that, "From such an understanding it is possible to recommend allowable human exposure levels and determine the most effective and efficient methods of pollution control."

Another part of the school's operation—occupational medicine and industrial hygiene—contains elements of internal medicine, dermatology, physical medicine, psychology and engineering. These factors are focused on man in his working environment, its safety, its toxic substances, its physical stresses and its psycho-social circumstances.

Says Dr. Peterson, "We look at man in his work environment and try to get a handle on what factors, particularly environmental ones, may prevent him from performing at his best."

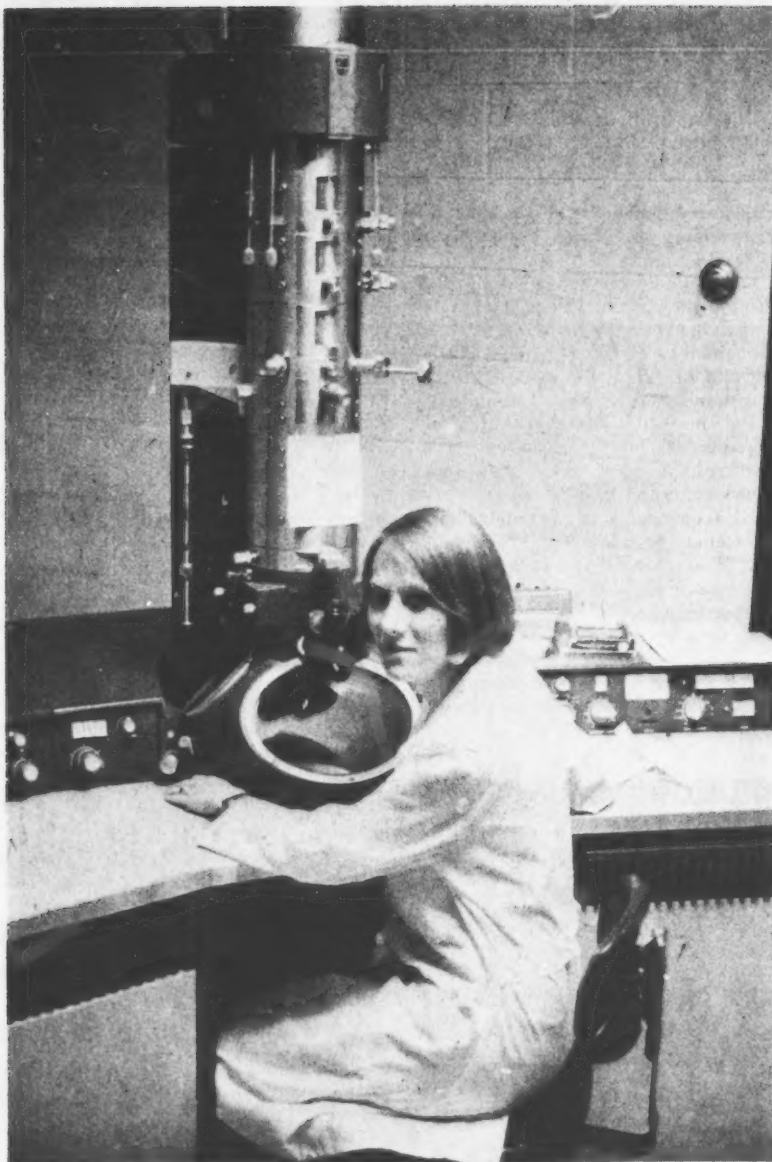
The major area dealing with man and his environment is called, appropriately enough, the Environmental Health

Sciences Program. It is concerned with identifying, measuring, evaluating and

controlling environmental health hazards.



Carolyn Hesse, one of many ISPH students involved in research, works with a low temperature plasma asher to determine the asbestos count in the sample she is inserting. The sample is bombarded with radio frequency waves that convert the oxygen to radical oxygen, eventually leaving only ashes and the asbestos.



After retrieving her asbestos sample from the low temperature plasma asher, Ms. Hesse observes it under the ISPH electron microscope. Not only does it allow her to see the fibers much better, the microscope has a built-in graph scale that enables her to measure the size of the fibers to a very fine degree.

A research operation, it is headed by Professor Arthur H. Wolff, chairman of the research committee and a professor of environmental health sciences. Its projects are divided into eight areas, two of which bear directly upon environmental concerns—occupation and environmental medicine, and environmental health sciences. All the projects are a combination of the efforts of faculty members, graduate students and now-former students.

Dr. Wolff notes that, "A common theme throughout all these projects is that while they reflect our hopes and desires, they sure as heck don't reflect an outpouring of money.

"That's the problem with any type of research, getting the money. Being a relatively small and new school means it's just that much harder for us.

"One of our research projects involved the collection of 150 water samples from Lake Michigan to determine the extent of

asbestos contamination in the lake. To make a long story short, we'll probably end up just throwing them away because it doesn't look as if we're going to get the necessary support to carry out the analysis for asbestos," Dr. Wolff lamented.

One study that has been funded for several years (by EPA) was undertaken by Dr. Niren Nagda, a recent ISPH graduate now working for the Virginia Air Pollution Control Office in Richmond.

In that study, says Dr. Wolff, Dr. Nagda tried to determine what effects different combinations of pollutants can or do have on mortality. He developed a computer model to estimate damage levels to the lungs from sulfur oxides, nitrous oxides and ozone.

"He was trying to establish a computerized system for ranking sources of air pollution within a region. The system would measure their damage severity, taking into account several factors such as estimates of ambient air quality levels associated with emissions, and estimates of population exposure and health damage," Dr. Wolff said.

Another project moving ahead deals with efforts by ISPH faculty member William H. Hallenbeck to see whether or not cement-asbestos transmission pipes in Chicago contribute asbestos to potable water.

"His tentative findings indicate that what fibers are transmitted aren't done so in any significant amount," Dr. Wolff said, meaning there isn't much to worry about on that score.

Anica Neal is involved in a project in which she is attempting to pinpoint a relationship between indoor and outdoor air pollution. She has been sampling the sulfur dioxide and particulate levels in the intensive care units of the university's hospital and comparing it with readings from just outside the building.

Ms. Neal, who recently finished her master's dissertation, picked intensive care units for the study because of her hypothesis that many patients in such units have marginal lung capacities as it is.

An ozone-related study that is funded and underway is being conducted by ISPH faculty member Robert Allen, and is the main thrust of his doctoral dissertation.

The hypothesis, says Dr. Wolff, is that ozone may be generated by common electric office equipment and by other products. So Allen is measuring emissions from reproduction machines, electric typewriters, home air cleaning equipment and assorted other electrical devices.

"Another study we're doing," Dr.

Wolff said, "is at the request of the Illinois Pollution Control Board. They want us to determine whether the use of water contaminated with asbestos fibers used in home humidifiers will cause asbestos contamination of indoor home air."

"If so, they also want us to try and find out how much accumulation of fibers there is over a certain period of time. So you can see that although the world of research might sometimes involve people in long white coats gazing at white mice, it certainly isn't always that way."

Still, for the "man in the street," relating to research remains somewhat of a challenge. Another question he might want answered is whether or not public health research has been ignored too long.

Says Dr. Wolff, "As an oversimplification, it is not possible with our present body of knowledge to prove that an environmental pollutant will or will not produce cancer at the levels at which they are found in the environment."

He went on to say that, "Almost all the evidence we have about carcinogens is that they can produce cancers in man or animals at very high levels."

According to Dr. Wolff, many

scientists believe that exposure to very low levels of these same substances may induce cancers in a very small percentage of the persons so exposed.

"This view is commonly challenged by environmental critics," Dr. Wolff noted, "who claim that just about anything, including common dietary items, can cause cancer if someone gets enough of it. But this is not true; most substances *do not* cause cancer."

"For example, you can give someone 50 to 100 grams of salt. He probably will get awfully sick, but there is no way common table salt can be related to the induction of cancer. The same would apply to most dietary items and, indeed, to the majority of environmental pollutants."

Returning to the question of the man in the street and his ability to relate to announcements regarding environmental research, Dr. Wolff said that, "Unfortunately, the public too often expects the scientist to have 'pat' or clear-cut answers to scientific problems."

"But in many instances it just can't be done, particularly when the problems are very complex. In such cases it is like a complicated jigsaw puzzle in that many

pieces have to be fitted together before a clear picture emerges.

"It is not really too surprising when you hear some scientist say that a particular pollutant appears to cause a serious effect such as cancer, and another scientist equally honest and dedicated can do a similar study or look at the same data and come up with different conclusions."

"Most persons, whether they are a scientist, a baker, a lawyer or a plumber have some built-in bias. Scientists, like others, can fall into the trap of overlooking or glossing over things that don't support their particular viewpoint (sometimes influenced by their source of support) and, conversely, emphasizing aspects that *do* support their contention," Dr. Wolff added.

He concluded that, "With the rapid and continuing increase in environmental pollutants, much more research is needed to obtain convincing evidence concerning the public health significance of many pollutants or groups of pollutants."

"Unfortunately," Dr. Wolff added, "the resources available for the support of such studies are grossly inadequate to meet the challenge, in my view."



The school's van that measures air quality is due to be operational shortly.

Now hear this (if you can)

Noise pollution can damage much more than just your ears.

BY HORST WITSCHONKE

Region V Noise Control Specialist

Noise, like light, varies greatly in intensity. At night, only a few stars light up the sky, enabling us barely to make out nearby trees and figures. On the other hand, light intensity during a case of snow blindness is so strong that the eyes have to be kept shut because of the pain.

To cope with these intense variations in light, the eye has several defense mechanisms—the lids, for closing the eye; the pupils, which contract to allow less light to enter the eye; and sensory receptors that have mechanisms to alter their sensitivity to adjust to changes in luminance.

The ear, on the other hand, does not have any defense mechanisms like the eye does. The situation of sound and hearing is quite different. As the ear developed, it did not need to contend with extensive daily variations in sound levels.

The ear, the auditory nervous system, and the interrelations between the auditory system and the rest of man's bodily and behavioral functions developed to meet the demands for

adaption to the environment, that is, the *environment of the past*. Only occasionally did the ear hear the noisier sounds of thunder, windstorms and sustained rain.

Probably the loudest sounds primitive man had to cope with were caused by ocean waves and waterfalls, but these levels were nowhere near those generated by transportation, industry, home appliances and music systems which daily bombard modern man's ear.

And while the daily energy intrusion of light upon the eye, with all its protective mechanisms, has not changed for centuries, the ear must contend with continuously increasing noise levels.

To date, it has not been shown that exposure to high level noise causes a shortened lifespan or a greater susceptibility to disease. However, evidence exists that noise of sufficient intensity and duration can:

- permanently damage the inner ear with resulting hearing losses ranging from slight impairment to nearly total deafness;
- result in temporary hearing losses

(repeated exposure to noise can lead to chronic losses;)

- interfere with speech communication and the perception of other auditory signals;

- disturb sleep;

- be a source of annoyance, which in turn can be the cause of many other problems;

- interfere with the performance of complicated tasks and can especially disturb performance when speech communication or response to auditory signals is demanded;

- adversely influence mood and disturb relaxation;

- reduce the opportunity for privacy.

In all these cases, noise can affect the essential nature of human life, that is, its quality.

A common term used when referring to hearing loss is temporary threshold shift, a condition in which the ear sustains large amounts of sound energy and hence becomes numb. This is a passing condition and the ear can recover once the loud noise has ceased and the ear can sufficiently recuperate in a quiet environment.



Besides the loud intrusions, author Witschonke likes to escape routine office noise whenever he can.

This recovery brings the ear back to its more sensitive stage, analogous to the eye, when one goes from a brightly-lit to a very dark place. The pupils dilate to allow more light to enter. In the eye this change is rather rapid, but with the ear, recovery can take from minutes, to hours, to as much as a month.

Clearly, if the ear is exposed to repeated daily levels that require recovery times in a quiet environment of more than a day, the ear will never fully recover. This can lead to a condition known as a noise induced permanent threshold shift. Threshold shift means that the ear is no longer as sensitive as a normal ear. In other words, one does not perceive sounds to be as loud as a person with normal hearing would perceive them.

As the threshold shift increases, conversation has to be at a level equivalent to shouting before it can be heard, and some people find themselves left out.

Some simply face their hearing problem and get help from a hearing aid to boost the sound levels so that normal conversation can be heard and understood. Many others, however, avoid this course and make other adjustments, such as withdrawing from conversations and, ultimately, from people and friends.

Noise induced permanent threshold shift can also be caused by a single exposure to a very loud sound such as a gun or firecracker going off very close to the ear. The receptor organ in the inner ear, known as the organ of corti, is made up in part of numerous hair cells with auditory nerve fibers attached to them. These hair cells and nerves are essential to the hearing process. Extremely intense noise can rupture this mechanism, causing a permanent threshold shift.

Continuous exposure to high level noise, without recovery, can also cause a permanent threshold shift by degenerating the hair cells and the accessory structure of the organ of corti. In other words, the ear is simply being worn out.

Threshold shifts can be present in certain frequency ranges while absent from the rest of the audible spectrum. This means, for instance, a person with a large threshold shift in the higher frequencies would hear the higher-pitched tones of violins and piccolos as very soft or barely audible, while the lower frequency notes of drums and basses would come through loud and clear.

Obviously, the person with such a hearing deficiency cannot hear the music as it was produced. He is hearing a distorted version. In a chronic case where high frequency tones cannot be heard,

music just turns into a low rumble.

Audiophiles, who have super-sensitive stereo systems for the sole purpose of wanting to hear exactly what was recorded at the studio or concert hall, should have their ears checked to determine any significant threshold shift. If one exists, they can never hear exactly what was recorded unless there is some compensation, regardless of the stereo system's quality.

It should be obvious from the foregoing that the ear is a very delicate and vulnerable organ. Once a permanent hearing loss is suffered, a definite loss in the quality of life ensues.

Since the ear does not have any protection in itself, it is very important to safeguard it from loud, short duration noises and the long term, lower level noises. Yet every day, people totally

neglect or abuse their ears.

Why do we ignore our hearing ability? Simply because, when exposed to noise levels which can cause long term damage, the body does not give any immediate warning signs. In fact, when listening to music at rock concerts or on their stereos, young people expose themselves to very high levels of sound that can have long term, damaging effects. Many times, exposure is so frequent that full recovery of the ear does not occur.

If you get pinched, there is immediate pain that lets you know something is not right, but when there is a hearing loss, you simply assume that the sound does not exist.

People should be aware of the importance of protecting their ears. It is probably the rare individual who, while working in his basement or garage, is concerned with ear protection while

Sound Levels and Human Response

	Noise level	Response	Hearing effects	Conversational relationships
Carrier deck jet operation	140	Painfully loud	Contribution To Hearing Impairment Begins	
	130	Limit amplified speech		
Jet takeoff (200 feet)	120			
Discotheque				
Auto horn (3 feet)	110	Maximum vocal effort		
Riveting machine				
Jet takeoff (2,000 feet)	100			Shouting in ear
Garbage truck				
N.Y. subway station	90	Very annoying		Shouting at 2 feet
Heavy truck (50 feet)				
Pneumatic drill (50 feet)	80	Annoying		Very loud conversation, 2 feet
Alarm clock				
Freight train (50 feet)	70	Telephone use difficult		Loud conversation, 2 feet
Freeway traffic (50 feet)		Intrusive		
Air conditioning unit (20 feet)	60			Loud conversation, 4 feet
Light auto traffic (100 feet)	50	Quiet		Normal conversation, 12 feet
Living room				
Bedroom	40			
Library				
Soft whisper (15 feet)	30	Very quiet		
Broadcasting studio	20			
	10	Just audible		
	0	Threshold of hearing		

Source: Environmental Protection Agency, *Noise Pollution: Now Hear This* (Washington, D.C.: Government Printing Office, 1974 reprint).



Region V noise control specialist Horst Witschonke measures sound levels of the cement drill being used by Samuel Carter (left) and Harold White. Ear muffs were procured for the two drillers after Witschonke saw them operating the drill minus ear protection and offered to help them save their hearing.

using noisy power tools. Numerous workers labor eight hours a day constantly exposed to high noise levels and still refuse to don any kind of ear protection, even when available.

The nation has long been concerned with providing adequate housing for its citizens and with eliminating housing that does not provide minimum standards of health, safety and convenience.

In 1973, a first attempt was made by the Housing Division of the U.S. Census Bureau to present statistics describing the broader concepts of housing quality. Factors such as air pollution, noise and vibration were evaluated in addition to the basic support systems such as water, utilities, sewer, fire and police protection, education, health, public transportation and shopping facilities.

The study showed that, for both owned and rental housing, street noise was the number one complaint (about 46 per cent), heavy street traffic was number two (about 29 per cent), and crime in the streets ranked between fourth and eighth, depending upon whether the house was owned or rented (about 14 per cent).

Thus, the data clearly indicates that the continuous daily aggravation of street noise is of major concern to the urban dweller. He is bombarded with noise from such sources as street traffic (trucks, cars, motorcycles), aircraft, lawn care tools, air conditioners, stereos, nearby highways and people-generated noise.

Congress expressed its concern over the exposure of individuals to noise by enacting on Oct. 27, 1972 the Noise

Control Act "to promote an environment for all Americans free from noise that jeopardizes their health or welfare." The act states that federal action is essential to deal with major noise sources in commerce, control of which requires uniform treatment.

Regulations that set ceilings on noise levels from large interstate motor carrier trucks and the rolling stock of railroads have been promulgated. Also, regulations on permissible noise levels that can be emitted from new products sold in commerce have been promulgated for medium and heavy trucks, and for portable air compressors.

The act, however, places the primary responsibility for noise control on state and local governments. A number of them now have noise regulations and effective noise control programs.

Carcinogens in the environment

Even the ancient Romans probably suffered from their effects.

BY MATT RACKI



In Copenhagen, Denmark, a study is underway to assess the suspicion that very heavy beer drinking may predispose men to cancer of the rectum and bowel.

Recent surveys in areas of high liver cancer incidence in parts of Africa have supported earlier findings that suggest, as the cause, a mold that forms on peanuts and other crops under hot, humid storage. The mold produces aflatoxins—substances thought to induce cancer.

After prolonged residence in the United States, women of Japanese origin develop breast cancer essentially as often as white Americans. Yet in Japan the disease is rare, occurring only one-sixth as often.

Cancer killed a reported 358,400 U.S. citizens in 1974, and each year about 900,000 new cases are diagnosed. That represents a staggering increase from 1900 for example, when cancer was the eighth leading cause of death. It now runs practically neck-and-neck with heart disease as the nation's leading killer.

How many deaths can be directly attributed to environmental causes is not known, although it is certain that insidious health hazards have been introduced by people into their environment for centuries.

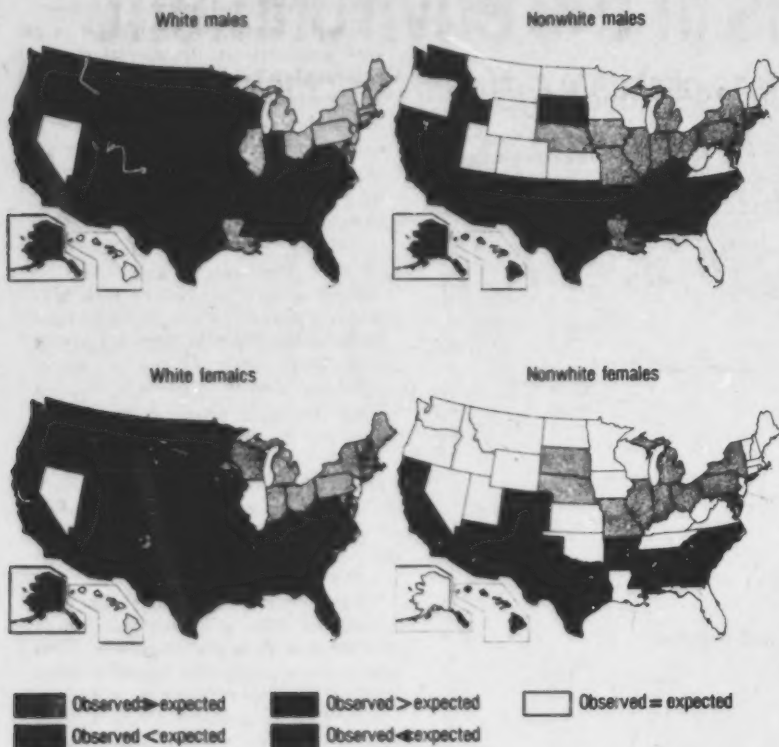
The superbly engineered aqueducts of Rome brought the populace not only water but poisonous lead, which leached from the lead pipes into the drinking supply. Some historians even believe that lead poisoning led to the fall of the Empire.

Closer to the present, the "mad hatters" of the 19th century suffered from neurological disorders caused by inhalation of mercury used in treating furs and felts.

Thus disease caused by or associated with chemicals introduced into the environment is nothing new. In our own day, various lung diseases such as emphysema have been linked with air pollution. Chemicals are believed to affect the incidence of heart disease (carbon monoxide), cause permanent nerve disorders (mercury), and induce bone abnormalities (vinyl chloride).

But far and away the main concern now is over cancer, especially as it relates to the environment. It is estimated that 60-90 per cent of all cancer is related to environmental factors. They include,

Distribution of Cancer, by Race and Sex, 1950-68



Source: David L. Levin et al., *Cancer Rates and Risks*, DHEW Pub. No. (NIH) 75-691 (2d ed.), Washington, D.C.: Government Printing Office, 1974), Figure 9.

among others, the large component of lung cancer attributable to cigarette smoking, exposures to chemicals in the workplace, and cancers from such natural agents as solar and cosmic radiation, natural asbestos, and the earlier-mentioned aflatoxins.

The conclusion that environmental factors are so important derives primarily from observations of extreme variations in both incidence and distribution of different kinds of cancer throughout the world—and within the U.S. If one accepts the lower range of incidence observed anywhere in the world for a given cancer type as representing a natural rate for that cancer, an observed excess is logically attributed to local and regional environmental factors.

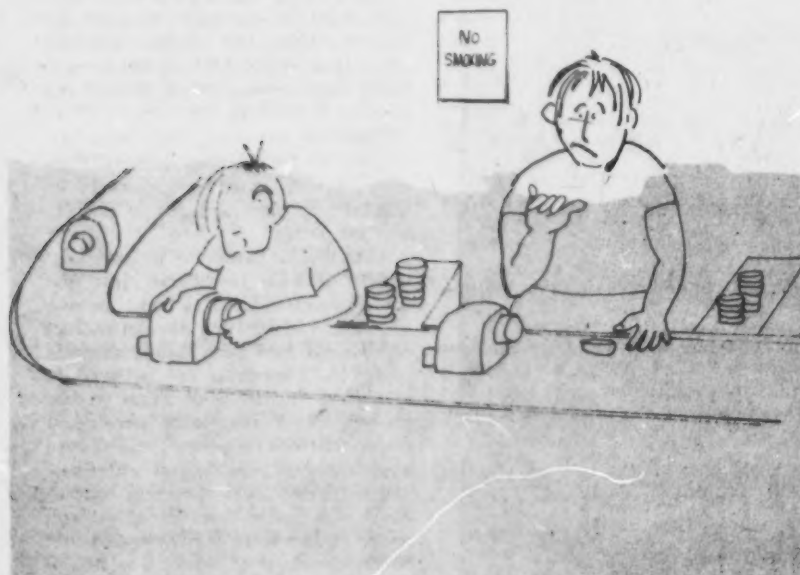
Although such estimations are somewhat crude in assessing the importance of environmental factors in causing cancer, epidemiological conclusions arising from international studies are supported by variations in cancer rates between natives and immigrants worldwide. Immigrants generally reflect cancer incidences in their country of origin for the first generation only while succeeding generations more nearly approximate the rates of the host country.

The extent to which the observed incidence and rise in incidence of cancers are attributable to manmade chemicals cannot be estimated with any precision. Some observed cancer undoubtedly arises from natural sources like radiation and asbestos, but much of the remaining is probably associated with carcinogenic agents produced by man.

The majority of known environmental carcinogens are encountered in the workplace. In fact, the link between cancer and chemicals was first detected among workers; in 1775 soot was singled out as a causative agent in chimney sweeps' cancer of the scrotum.

Association of occupational exposure to asbestos with increased lung cancer was first reported in the 1950s. However, determination of the causative agent was complicated by other factors like cigarette smoking.

But the diagnosis of mesothelioma, an otherwise rare type of cancer, in some asbestos workers provided conclusive evidence that asbestos is a cancer hazard.



Leading Causes of Death, 1900, 1960, and 1970

Rank	Cause of death	Deaths per 100,000 population	Percent of all deaths
1900			
	(All causes)	(1,719)	(100)
1	Pneumonia and influenza	202.2	11.8
2	Tuberculosis (all forms)	194.4	11.3
3	Gastritis, etc	142.7	8.3
4	Diseases of the heart	137.4	8.0
5	Vascular lesions affecting the central nervous system	106.9	6.2
6	Chronic nephritis	81.0	4.7
7	All accidents ¹	72.3	4.2
8	Malignant neoplasms (cancer)	64.0	3.7
9	Certain diseases of early infancy	62.5	3.6
10	Diphtheria	40.3	2.3
	Total		64
1960			
	(All causes)	(955)	(100)
1	Diseases of the heart	366.4	38.7
2	Malignant neoplasms (cancer)	147.4	15.6
3	Vascular lesions affecting the central nervous system	107.3	11.3
4	All accidents ²	51.9	5.5
5	Certain diseases of early infancy	37.0	3.9
6	Pneumonia and influenza	36.0	3.5
7	General arteriosclerosis	20.3	2.1
8	Diabetes mellitus	17.1	1.8
9	Congenital malformations	12.0	1.3
10	Cirrhosis of the liver	11.2	1.2
	Total		85
1970			
	(All causes)	(945.3)	(100)
1	Diseases of heart	362.0	38.3
2	Malignant neoplasms (cancer)	162.8	17.2
3	Cerebrovascular diseases	101.9	10.8
4	Accidents	56.4	6.0
5	Influenza and pneumonia	30.9	3.3
6	Certain causes of mortality in early infancy ³	21.3	2.2
7	Diabetes mellitus	18.9	2.0
8	Arteriosclerosis	15.6	1.6
9	Cirrhosis of the liver	15.5	1.6
10	Bronchitis, emphysema, and asthma	15.2	1.6
	Total		85

¹ Violence would add 1.4 percent; horse, vehicle, and railroad accidents provide 0.8 percent.

² Violence would add 1.5 percent; motor vehicle accidents provide 2.3 percent; railroad accidents provide less than 0.1 percent.

³ Birth injuries, asphyxia, infections of newborn, ill-defined diseases, immaturity, etc.

Source: President's Science Advisory Committee Panel on Chemicals, *Chemicals and Health* (Washington, D.C.: Government Printing Office, 1973), p. 152; U.S. Department of Health, Education, and Welfare, Public Health Service, *Facts of Life and Death*, DHEW Pub. No. (HRA) 74-1222 (Washington, D.C.: Government Printing Office, 1974), p. 31.

In the past decade, where environmental data exist, most victims may be traced to potential or actual asbestos exposure.

Until recently, vinyl chloride, a gas used primarily in the manufacture of polyvinyl chloride plastic, was also used as a propellant for aerosol sprays. In 1974, the discovery of four cases of cancer of the liver (an extremely rare cancer) among vinyl chloride workers in a Louisville, Ky., plant suggested that vinyl chloride is a carcinogen.

But given the rapid rise of cancer as a cause of death in recent decades, the investment in cancer prevention has been small, compared with the amount of human and financial resources invested in therapy.

Basic research, animal studies, and human population studies aimed at carcinogens before their introduction into the environment are being conducted by EPA, the Energy Research and Development Administration, and many component agencies of the Department of Health, Education and Welfare.

Because it is clearly unacceptable to rely upon human studies for carcinogen identification, a preventive approach to cancer should emphasize animal testing and the elimination or reduction of unwarranted carcinogenic exposures, says the 1975 annual report of the Council on Environmental Quality. The financial, physical and human constraints upon animal tests help explain why only a small proportion of the chemicals used today have been studied for carcinogenicity.

EPA, ERDA, and HEW are sponsoring research at several universities and in their own labs in an effort to develop these tests as rapidly as possible. If the tests prove to be valid models, they offer the hope of reducing the 2- to 3-year testing time for carcinogenicity to as little as one week, of reducing the costs from many tens of thousands of dollars to perhaps less than \$1,000 per compound.

Increased emphasis on prevention is the only prudent policy towards cancer in light of modest recent improvements in cancer therapy, the CEQ report notes. Prevention entails identification of cancer risks prior to human exposure, so scientist policymakers are relying on animal experiments to evaluate the cancer risk and to develop public health policies.

The tests are expensive and time-consuming. Screening methods currently under development, involving human or bacterial cells grown in laboratory test tubes or petri dishes, offer the hope that rapid, inexpensive indicators of the cancer-causing potential of chemicals may soon be available.

Wastes - hazardous to your health?

Improper disposal can mean headaches for everybody.

BY MATT RACKI

A factory begins depositing chemical wastes in a nearby city dump. The chemicals soon work their way into the soil and down into a spring beneath the dump, then from the spring into a creek.

Result? Dead fish and wildlife along 10 miles of the meandering creek, so polluted it has to be placed off-limits for livestock, fishing and recreation. The wastes contained polychlorinated biphenyls (PCBs), a toxic chemical.

In another instance, several people with disturbing symptoms are admitted to a hospital. Tests show they are suffering from arsenic poisoning. In-

vestigations reveal the source: well water contaminated by arsenic insecticide buried 30 years earlier on nearby farmland.

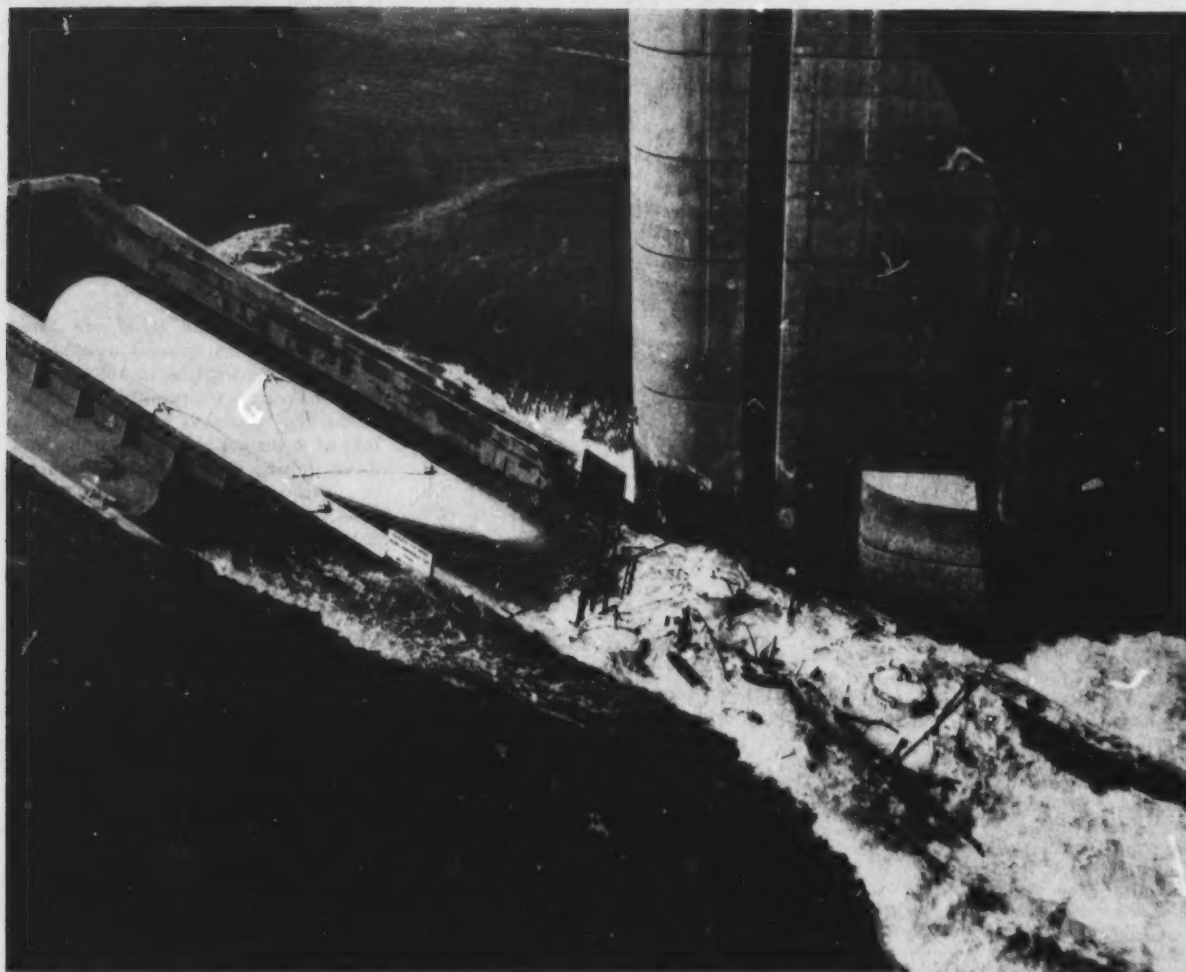
These incidents have several things in common: each was a real episode of recent years. The villain each time was a hazardous waste. And each episode occurred because proper control over the storage, treatment and disposal of hazardous wastes was lacking.

An extremely significant factor they have in common is that the hazardous wastes or toxic substances found their way into drinking water supplies, or

water that eventually ended up as such.

Foreseeing such an assault on the land, Congress passed the Solid Waste Disposal Act, as amended by the Resources Recovery Act of 1970. The job of studying the hazardous waste problem and finding ways to solve it fell to EPA. The agency, among other duties, was called upon to relay information on the state of the art of local hazardous waste management technology to industry, and state and local governments.

The term "hazardous wastes" encompasses a wide spectrum; solids, liquids, gases and sludges. They may be



Chlorine-laden barges don't sink every day, but other accidental hazardous spills occur regularly.

toxic chemicals, acids or caustics, as well as biological materials, chemical and biological warfare agents, and radioactive materials.

The problem of disposal is that the wastes may percolate or leach into groundwater, thus contaminating or poisoning water supplies. They may be carried by rain runoff directly into streams, rivers, lakes and oceans. They also may pollute the air when blown about by the wind.

Sanitary landfills—where wastes are covered with earth each day—are preferable. But unless specifically designed, a sanitary landfill may still pollute surface and groundwater, and venting gas may pollute the air.

One special landfill project for hazardous wastes not yet to the drawing boards and near the Minneapolis-St. Paul area, will be a "landmark" of sorts, a demonstration partially funded with an EPA grant to Minnesota.

Covering a five-year period, the grant will support a project to show "environmentally sound and technically feasible land disposal techniques" for hazardous chemical substances. Those include wastes from metal mining, pharmaceuticals, electroplating, petroleum refining, etc.

Among the techniques to be demonstrated will be encapsulation, waste blending, neutralization and waste immobilization treatment and disposal techniques.

The fact that an enormous amount of hazardous wastes get into municipal drinking water supplies is no small matter. A minimum of 4,000 known cases of waterborne illnesses occurs each year in this country say EPA officials, who note the actual total may be 10 times greater.

To combat this potential threat to the health of Americans, Congress in 1974 passed the Safe Drinking Water Act. It provides that EPA set national standards for all public water systems having at least 15 service connections or regularly serving at least 25 people. The act also stipulates that the states enforce the standards, as well as otherwise supervising water supply systems and sources of drinking water.

The drinking water standards set forth in the act are of two types—primary and secondary. Primary standards are aimed at protecting public health with the best water treatment methods generally available, taking cost into consideration. These standards will ultimately include maximum allowable contaminant levels in drinking water, water treatment techniques and general criteria for water supply systems.

Secondary standards are designed to protect public welfare, and apply just to

taste, odor and appearance of drinking water. Unlike primary standards, secondary regulations are enforced only if a state elects to do so.

Interim primary standards were proposed by EPA in March 1975, promulgated in December 1975, and are to become effective in June 1977.

One of the most important things the interim primary standards do is set maximum limits on the amount of organic and inorganic contaminants. Measured in milligrams per liter (mg/l) the limits on organic contaminants are as follows: endrin, .0002; lindane, .004; methoxychlor, .1; toxaphene, .005; 2,4-D, 1.00; 2, 4, 5-TP Silvex, .01.

Maximum limits on inorganic contaminants, also measured in mg/l, are: arsenic, .05; barium, 1.00; cadmium,

surface waters, including Chicago. According to Mike Davoust, an association official and Chicago's deputy commissioner of the Bureau of Water Operations, "We have to establish more data on the connection between levels of chloroform (in drinking water) with the incidence of cancer."

His statement came only a week after Dept. of Health, Education and Welfare officials announced in Washington that chloroform was found to cause liver and kidney cancers in test animals.

In addition to hazardous wastes, untold amounts of contaminants such as mercury, PCBs and PBBs (polybrominated biphenyls) get into the environment through man's carelessness.

PCBs are a featured attraction of the



Hazardous wastes present a definite problem of safe disposal.

.010; chromium, .05; lead, .05; mercury, .002; nitrate, 10.00; selenium, .01; and silver, .05.

At present, the National Academy of Sciences is conducting a study on the health effects of drinking water contamination. The results will form the basis of revised primary standards—scheduled to be proposed in 1977 and to become effective in 1979.

And just last month, the American Water Works Association at its annual conference called for a \$4 million federal search for cancer-causing chemicals in the nation's 420 largest drinking water supply systems, which serve about 77 million customers.

The association asked EPA to sample water from the 420 systems that use

Toxic Substances Act, a bill now in committee in both houses of Congress. It would give EPA authority to regulate the manufacture, importation and selling of industrial chemicals such as PCBs.

In a similar vein, a federal judge recently approved a settlement under the Clean Water Act between EPA and environmental groups to strengthen water pollution control rules. The pact requires the agency to regulate the discharge of 65 toxic chemicals, many of them cancer-causing, by 21 major industries into the nation's waterways.

Under terms of the settlement, according to an EPA official, the agency will first study and then draw up effluent standards for the 65 chemicals to be put

into effect in stages between 1978-83. Chemicals on the list include such major ones as asbestos, vinyl chloride, arsenic, chloroform, mercury, cyanide, PCBs, benzene, carbon tetrachloride, cadmium, lead, nickel and zinc.

Besides toxic substances and hazardous wastes, there is also the danger of accidental hazardous spills that occur almost daily throughout the nation.

Region V certainly has its share. In May, some 200 persons were evacuated near Stoy, Ill., after 16 cars of a 40-car train derailed and spilled 10,000 gallons of sulfuric acid into a nearby creek.

Earlier the very same day, about 300 people had to flee their Centreville, Ill., homes when eight cars of another freight train jumped the tracks, springing leaks in two acid-carrying cars.

And only a few days after that mishap, two freight trains derailed in the western Chicago suburb of Glen Ellyn, forcing thousands of residents to evacuate their homes for 16 hours. The accident ruptured a tank car carrying anhydrous ammonia which, along with diesel fuel from the train's engine, flowed into a storm sewer system that emptied into a small lake, devastating the aquatic life.

Meanwhile, legislation concerning one toxic substance, PCBs, is still a high interest item. According to one Region V Surveillance and Analysis Division official, laws regulating PCBs are now on the books in Indiana, Michigan, Minnesota and Wisconsin, and are pending in Illinois.

PCBs gained world-wide notoriety in

1968 when five people died and 1,000 others were stricken in Japan after eating cooking oil contaminated by the chemical. Since that time, Japan has banned all import and production of these compounds, Sweden established a permit system for PCB use, and Canada lowered the allowable PCB levels in fish from 5 to 2 parts per million.

In the final analysis of toxic substances and hazardous wastes, as with air and water pollution control, there are no free lunches. Everyone—industry and the general public alike—must be prepared to foot the bill for a safe and healthful environment.

The costs and risks of not bringing hazardous wastes (as well as toxic substances like PCBs) under proper control are infinitely greater.

Please handle with care (or else)

Pesticides are definitely intended to be taken seriously.



BY MATT RACKI

A few years ago, a 2½-year-old girl was found playing with a package of rose spray powder composed of lindane and malathion. She was treated with atropine and pralidoxime for two days and given transfusions totaling 10 pints of blood. But she never regained consciousness and died two days after her exposure to the powder.

An isolated instance? Perhaps, but it dramatizes the sometimes-fatal consequences many pesticides can have in the wrong hands. And they needn't be in hands only 2½ years old.

A report in the *Journal of the American Medical Association* details an incident involving 30 men, previously unexposed to pesticides. They picked oranges for eight hours in a grove that had been sprayed 16-19 days earlier with parathion. Seven of the men became ill shortly after lunch, three others later the same day, and one the next day.

All were afflicted with general symptoms of weakness, vomiting and profuse sweating. One was almost unconscious and two were hardly able to see. All were hospitalized, but eventually recovered.

(continued on page 20)

U.S. Pesticide Production, 1968-73

(In thousands of pounds ¹)

Pesticide	1968	1969	1970	1971	1972	1973 ²
Fungicides						
Copper naphthenate	1,718	1,545	1,730	1,695	2,206	1,552
Copper sulfate ³	37,192	42,072	28,768	31,112	28,064	39,688
Dithiocarbamic acid salts	(⁴)	(⁴)	39,381	35,110	40,438	41,417
Ferbam	1,900	⁵ 1,500	(⁴)	(⁴)	(⁴)	(⁴)
Nabam	⁶ 2,000	1,938	(⁴)	(⁴)	(⁴)	(⁴)
Zineb	3,081	⁷ 2,500	(⁴)	(⁴)	(⁴)	(⁴)
Mercury fungicides	1,448	941	1,114	601	547	361
Pentachlorophenol (PCP) ⁸	48,575	45,988	47,170	50,877	49,704	46,606
2,4,5-Trichlorophenol and salts	28,066	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Other organic fungicides	66,793	85,607	50,307	60,875	49,610	63,738
Total ⁷	190,773	182,091	168,470	180,270	170,569	193,362
Herbicides						
2,4-D acid ¹	(79,263)	(47,077)	(43,576)	(⁴)	(⁴)	(⁴)
2,4-D acid, esters, and salts	94,116	56,998	(⁴)	(⁴)	(⁴)	(⁴)
DNEP, ammonium salts	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Maleic hydrazide	(⁴)	2,771	3,271	(⁴)	4,472	(⁴)
Methanesulfonic acid salts	(⁴)	(⁴)	30,454	24,476	30,698	40,126
Phenyl mercuric acetate (PMA) ¹	582	534	457	337	307	290
Silvex	(⁴)	1,597	2,016	(⁴)	(⁴)	(⁴)
Sodium chlorate ¹¹	30,000	30,000	30,000	30,000	30,000	30,000
2,4,5-T acid ¹	(17,530)	(4,999)	(⁴)	(⁴)	(⁴)	(⁴)
2,4,5-T acid, esters, and salts	42,542	11,626	12,335	(⁴)	(⁴)	(⁴)
Other organic herbicides	235,541	268,238	312,132	404,036	416,141	455,693
Total	¹² 499,574	423,840	434,241	458,849	481,618	526,109
Insecticides, fumigants, rodenticides ¹¹						
Aldrin-toxaphene group ¹³	115,974	107,311	88,641	116,264	141,858	145,584
Calcium arsenate	3,398	1,158	1,144	940	(⁴)	(⁴)
DDT	139,401	123,103	59,316	(⁴)	(⁴)	(⁴)
Dibromochloropropane	7,887	8,611	(⁴)	(⁴)	(⁴)	(⁴)
Lead arsenate	9,016	9,204	4,156	6,168	5,164	3,946
Methyl bromide ¹³	20,454	20,033	21,047	(⁴)	24,633	29,571
Organophosphorus insecticides ¹	(⁴)	(⁴)	(132,496)	(138,185)	(160,642)	(187,752)
Methyl parathion	38,163	50,572	41,353	37,226	51,076	48,890
Parathion	¹⁴ 20,000	(⁴)	15,259	(⁴)	(⁴)	(⁴)
Other	(⁴)	(⁴)	75,884	100,959	109,566	138,862
Other organic insecticides	227,326	260,892	188,632	303,261	236,442	276,262
Total	581,619	580,884	495,532	564,818	568,739	643,115
Total production	¹⁴ 1,271,966	¹⁴ 1,186,815	¹⁴ 1,098,143	1,203,937	1,220,926	1,362,586

¹ Weight as applied; technical grade, different purities for different compounds.

² Preliminary.

³ Shipments by producers for use in agriculture (including use as a minor plant nutrient).

⁴ Withheld to avoid disclosure; figure included in totals.

⁵ Estimated.

⁶ Not only a wood preservative but also a herbicide and desiccant.

⁷ Sulfur not included may amount to 150 million pounds.

⁸ Figures in parentheses represent duplication but are included so that totals are comparable with 1971 and 1972 totals.

⁹ Also a fungicide.

¹⁰ Estimated shipments to producers of herbicides and defoliants.

¹¹ Includes a small quantity of synthetic soil conditioners; does not include the fumigants carbon tetrachloride, carbon disulfide, ethylene dibromide, and ethylene dichloride, which have many other uses; nor does it include paradichlorobenzene (classified by the Tariff Commission as an intermediate) or inorganic rodenticides.

¹² Includes aldrin, chlordane, dieldrin, endrin, heptachlor, Strobane (R), and toxaphene.

¹³ Fumigant for control of both insects and weeds.

¹⁴ Revised.

Source: D. Lee Fowler and John N. Mahan, *The Pesticide Review: 1973* (Washington, D.C.: U.S. Department of Agriculture, undated); U.S. Department of Agriculture unpublished data.

Chemical Classes of Carcinogens

Classes/examples	Sources of exposure
Aromatic amines β-naphthylamine Benzidine Nitrosamines	Manufacture of rubber products Dyemaking Rubber additives, present in or metabolized from nitrosamine or nitrites in foods, present in tobacco smoke
Chlorinated hydrocarbons Vinyl chloride Aldrin/dieldrin DDT bis-chloromethylether Polynuclear aromatics (tars) Anthracene Benzo(a)pyrene Radioactive elements Metal dusts Beryllium Chromates Arsenic Steroid hormones Diethyl stilbestrol (DES)	Intermediate in PVC plastics manufacture Pesticide Pesticide Impurity in certain chemical resins Tobacco smoke Polluted air from combustion of fossil fuels Various medical, scientific, and other uses Lightweight alloys, component of rocket fuel Paint pigments Pesticides, pharmaceuticals Animal feed additive, "morning after" pill

(continued from page 18)

The point is that, although the estimated number of hospitalized pesticide poisonings cases apparently is low, the number could be sliced even further through education and strict adherence to pesticide safety practices.

In an effort to get some idea of just how low (or perhaps not so low) the number of observed cases of pesticide poisonings are, EPA sponsored a university survey of 785 of the approximately 7,000 general hospitals in the U.S. The survey dealt with cases involving farmers and agricultural workers.

The data covered the years 1971-72-73 and revealed that the incidence of pesticide poisonings rose every year—from 6.7 per 100,000 in 1971 to 9.3 per 100,000 in 1972 to 11.4 per 100,000 in 1973. That means there were 27 observed cases involving farmers and agricultural workers in 1971, 37 in

1972 and 44 in 1973. But if one looks at all pesticide poisoning cases, the figures are much more substantial: 336 in 1971 and 368 in both 1972 and 1973.

Broken down by type of pesticide, poisonings of farmers and agricultural workers involved organophosphates in 59.2 per cent of the cases, 19.4 per cent were attributed to chlorinated hydrocarbons, 9.3 per cent to carbamates and amides, 2.8 per cent to arsenic, and the rest to other pesticides such as silica gel.

And given the plethora of chemicals used in the manufacture of pesticides, the unbiased observer would probably have to marvel at why there aren't many more reported cases of pesticide poisonings.

During the past 20 years, for example, pesticide usage in the U.S. alone increased from a few million pounds a year to about one billion pounds annually, according to one

agricultural chemical magazine.

Currently, there are roughly 1,400 basic chemicals being used as active ingredients in the formulation of approximately 46,000 different brands of pesticide products, according to EPA's Pesticides Registration Division.

Organophosphates led the list when it came to the number of pesticide poisonings of farmers and agricultural workers. It is one of the most widely-used pesticides, especially as a substitute for DDT, banned on Jan. 1, 1973.

The organophosphates and the chlorinated hydrocarbons are like two different sides to the same coin. The organophosphates are highly toxic, but leave little residue, while the chlorinated hydrocarbons, although not nearly as toxic, are much more persistent in the environment.

According to a Region V pesticides official, since pesticide poisoning symp-

toms mimic a host of common disease symptoms and may be frequently overlooked in diagnosis, it is important to be aware of their general characteristics, especially organophosphate pesticides.

They include such substances as demeton, dimethoate, disulfoton, phorate, mevinphos, parathion and methyl parathion, all marketed under numerous brand names.

Clinical symptoms of organophosphate pesticide poisoning may include pulmonary edema, nausea, diarrhea, general weakness and collapse. Acute poisoning may cause toxic psychosis, resembling acute alcoholism, while chronic poisoning may mimic influenza.

The fact that pesticide poisonings often do resemble symptoms of other ailments was one of the reasons EPA published *Diagnosis And Treatment of Poisoning By Pesticides*. This booklet discusses the chemical makeup of

organophosphates, carbamates and chlorinated hydrocarbons, details types of diagnoses and treatments, and lists specific antidotes where they exist.

The most far-reaching responsibility given to EPA by Congress to insure proper use of pesticides is the program to certify private pesticide applicators, discussed at length in the March issue of *Environment Midwest*.

Although the agency has responsibility for developing and publishing standards of competency of private applicators, it is intended that the states assume primary responsibility for certification and training of applicators.

State competency standards must at least equal those established by EPA, but states may set forth additional requirements if they wish. At present, the certification plans of the six states in Region V are being reviewed for approval

by the regional office.

In Region V, all states except Michigan and Wisconsin have scheduled or initiated private applicator training. Michigan's training is due to begin this fall, as is Wisconsin's, although some trainers in the latter have already been trained.

The road to final approval of a state's certification plan involves 11 steps—beginning with reception at Region V headquarters of a state's initial draft and ending with a "Federal Register" (FR) notice that the plan has been approved. Michigan is farthest down the road—an FR notice of EPA Region V Administrator George Alexander's intent to approve its plan appeared in the April 8 edition.

On the other end of the scale, Illinois in early June submitted a draft of its final plan to Region V headquarters, only the fourth step in the 11-step process.

Prisoners of pollution

Jane Klingman, Tom Watson know all about dirty air.

(You can pore over all the air pollution charts you want. You can stand on a hill and look down at the brownish-yellow blanket hovering over a city and say, "That's terrible! We've just got to do something about the air pollution around here." But if you aren't Jane Klingman of Cincinnati or Tom Watson of suburban Chicago or someone like them, you really don't know the meaning of "Talk is cheap.")

To get some idea of how people can REALLY be affected by air pollution, Region V writer Phyllis Kierig talked with Mrs. Klingman and Watson. They tell the story of air pollution far better than any chart, press release or study ever could.)

Hydrocarbons, nitrogen oxides, carbon monoxide—they're just words. Words that make no immediate impact until they are translated into human dimension. Yet thousands of people struggle for life, for breath, for lung-expanding air because of major pollutants dumped into the air by cars and trucks.

Air pollution is what makes Jane Klingman a prisoner in her own home in Wyoming, Ohio, a Cincinnati suburb.

Five years ago she contracted a severe respiratory disease. Her lungs lost the

ability to transmit oxygen to the blood-carrying vessels.

"I got sick in 1971," said Mrs. Klingman. "Since the first year I've been getting worse and worse. Teams from the University of Cincinnati are studying me to see what makes my disease so severe. They don't know."

"They do know that the oxygen in my blood is only 10 per cent of normal. I can stay off oxygen for only two hours a day when the pollution count is extremely heavy."

Mrs. Klingman says she does not have to struggle as hard for air when pollution levels are low, noting that, "I can stay off oxygen from six to 10 hours a day when the air is relatively clean. I went out in the car with my husband for a ride last week. I had a wonderful time. . ."

Most of the time, Mrs. Klingman is trapped inside her suburban home. The electronic home air filter cleaning system works 24 hours a day. The oxygen tanks are never very far from her.

As part of her respiratory treatment, she has to make herself get out of bed and walk. She can usually go six- to seven-tenths of a mile on room air when it's bad outside.

She is limited to walking inside on bad days. And inside the house she's limited

by the length of the air hoses through which she breathes. Mrs. Klingman has three "clean air" hoses. A 30-foot hose takes her from the bed to the bathroom. A 90-foot hose allows her to walk to other rooms. The 120-foot hose lets her join her husband in the study.

She moves slowly, and her husband walks carefully to make sure he doesn't trip over or unhook the life-sustaining clean air hoses.

Mrs. Klingman has to walk to maintain muscle tone. Exercise is important, but it's an air-consuming task.

On a low-pollution day it takes her 10 minutes to brush her teeth; it might become a major task on a day when the pollution is bad.

Raising her arms requires a large amount of air, and a shower is a 45-minute necessity of living.

Mrs. Klingman absolutely must know the daily pollution count. She doesn't miss the early morning radio and television reports and is angry that the stations don't give the levels more times a day. She thinks the frequency of the readings has been reduced because the stations don't want to offend big advertisers.

But now, 63-year-old Mrs. Klingman has discovered one can personally tell the



Jane Klingman needs regular doses of oxygen to help her perform the most routine activities.

pollution count, without the media reports. As pollution levels rise, she starts on a downer.

"I can always tell when I need oxygen because I get upset. I also get depressed. . . that's not my usual personality. It's so frustrating.

"I can't cook anymore, or hang up my clothes, or take them down from the rack. My husband has to help me do it all. This is hard for him. I'm not sure he always knows how to cope.

"If I stop trying to breathe, though . . . it's terminal. That's why the morale of someone with a respiratory disease is so important. I spend a lot of time looking outdoors at the flowers in our yard. I love looking at the flowers. My husband plants them for me.

"I'm lucky I can look out at a nice yard. Most people don't have nice yards. The temptation is to quit."

Before her respiratory disease struck, Mrs. Klingman was in good health. She still is, except for her lungs.

She and her husband are thinking of leaving Ohio. They are both native Midwesterners, so it's difficult to think about moving to Florida or the Carolinas.

They need an area with low pollution levels, and assurance that the city or town they might consider is not trying to attract industries that could be air polluters.

At the same time, the logistics of moving are tough. Mrs. Klingman can't fly to a potential new home because the

altitude maintained in airliners is the equivalent of 6,000 feet above sea level. Besides, the airlines do not want a passenger carrying potentially-explosive oxygen supplies on board.

She could travel by car, but she and her husband would have to pursue a route that avoided any kind of mountain range. The high altitudes could be a swift killer.

To go another route would mean packing innumerable oxygen bottles—and just how many bottles can a car hold?

"Maybe we could go," said Mrs. Klingman, "if we could manage to stop overnight only in towns that had hospitals."

Meanwhile, she waits for the visits from the Cincinnati research respiratory team. She sees Dr. Robert Loudon, head of the general pulmonary division at Cincinnati General Hospital.

House calls by other visitors are severely limited because of the danger of their infecting Mrs. Klingman. One cold could be fatal to her.

"If you have a cold or have been around a person with a respiratory virus, don't come to visit me," she said, explaining that the steroids she uses to combat the respiratory disease weaken her natural defenses.

"Living—it's rough," Mrs. Klingman said. "If the president of every corporation that pollutes the air had my disease for just one week, the environment would be cleaned up."



A person must review every routine of his life if he has breathing problems, said Tom Watson, a Geneva, Ill., homeowner and businessman in Chicago's Loop.

Watson, in his mid-40s, has emphysema. He knows that any change in the atmosphere has an effect on his breathing. He also knows that any type of air pollution means he might not be able to breathe.

He's up at 5:30 a.m. every day to listen to the ozone and pollutant readings. He's angry that Chicago's daily report is given in such highly technical terminology.

"I can't understand it. I'm not a scientist," added Watson, who needs plainer information.

"I think one of the reasons why Chicago's report is so technical," explained Watson, "is that industry doesn't like workers staying home because of 'bad' ozone reports."

As it is, Watson, a marketing consultant, has an air purifier machine running continuously at home and beside his desk at work. Normally, he often would be out on the streets. Now, he tries to make the job more of a desk-oriented business.

Still, he has to see clients. On a hot day, it will take him twice as long as he thought it would to walk around the Loop. He doesn't really want to go

outside on hot days, since they usually accelerate the rise of pollutant levels in the Loop.

They create an infection in his lungs similar to that caused by cold germs. The infection causes his lungs to fill with phlegm. He coughs. He has less capacity to breathe.

Watson also has to keep his distance from smokers. He can't breathe in smoky offices, so he avoids people who smoke. Yet, Watson realizes he can't live in a vacuum.

"It's hard to tell a potential client that his smoking bothers me," said Watson. "Emphysema is my problem; you can't change business patterns. I have to rethink how I am going to react to everyday business life. . . ."

Pollution and emphysema cause otherwise minor inconveniences to become major problems for Watson. As an example, he said, he must deal with public reaction to a man who looks totally fit, but doesn't act it.

"Once," he said, "I was going home on the commuter train when it broke down not too far from my station. I was in the 'no smoking' car, but after awhile of just sitting there the commuters got impatient. They started lighting cigarettes.

"Soon, the smoke made it difficult for me to breathe. Then the conductor came by and asked if we could get out and walk the last mile or so to the station. I couldn't. I looked healthy, but I wasn't getting enough air to make the walk. You can guess what the people in the car thought."

At home, Watson must have air cleaners running constantly. His wife, who still smokes, must leave the room or even the house itself for a cigarette, and guards him from smokers.

His children can no longer smoke in his presence. He has to hire someone to mow his lawn because he can't take the mower exhaust fumes. The lawn is too big for an electric mower.

Lack of air makes it very difficult for him to push or carry anything. Jobs demanding a lot of lifting are out of his reach.

If he goes out of town on a business trip, he has to arrive at the airport an hour before the other passengers to secure a cart for his luggage. It's too much of a strain on him to walk and carry luggage.

"I have too much pride to be pushed in a wheelchair to the boarding area," Watson noted, "so I just arrive extra early for departures."

He tries to avoid any unnecessary business trips by plane since he has to struggle with the atmospheric changes within the plane's cabin. Actually, pollution and breathing problems have

put a damper on any type of travel.

Watson says that, "For an active family, it's a pain in the ear to have one member unable to travel extensively. It is difficult to make recreation plans for a family where dad neither wants to travel very far or be in a crowd of people.

"I've almost cut out social engagements of more than six people," said Watson.

Lack of clean air—or just air itself—also affects a person's emotions, according to Watson. The more air a man lacks, the more emotional he becomes. The more emotional a person becomes, the more air is needed to survive. The quintessential vicious circle.

"So the air problem affects you sexually," Watson said. You can't breathe when you're overly emotional. If you can figure out some way to have sex without getting emotional about it, be sure and tell me."

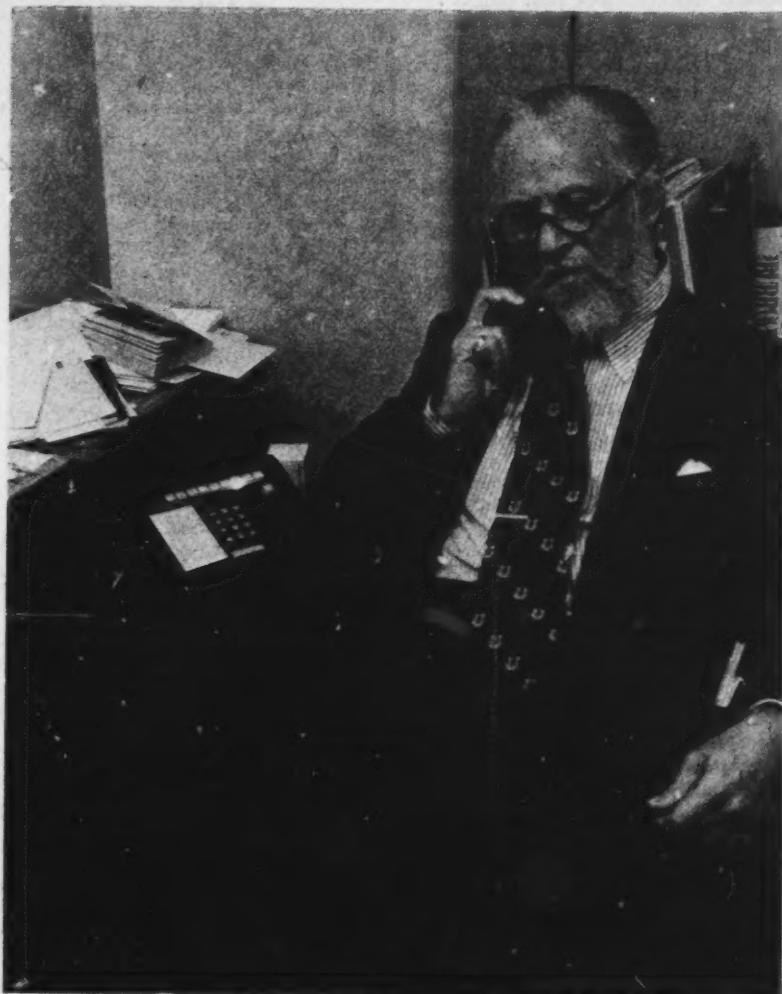
As far as Watson is concerned, he feels that pollution doubles the amount of time required for every physical effort.

Pollution also costs him a bundle. He figures he paid more than \$1,000 for his home exercise equipment. The stationary bikes and other physical fitness equipment he keeps at home were not inexpensive, nor were his two portable air cleaning machines. He also spends from \$80-90 a month for medication.

He can no longer take the bus into downtown Chicago meetings. The bus stops are too far from his office and the buses pick up too many pollutants.

He doesn't have the strength to walk long distances anymore, so he has to pay for more cab rides. On ozone alert days, he doesn't even come into the office. It is a day gone . . . work not done. . . .

"This is an expensive disease," Watson declared, "and in more ways than one."



Emphysema has forced Tom Watson to use an air purifier (left) at his desk and do most of his marketing consulting by phone.

ONCE OVER LIGHTLY



Cincinnati establishes oil recycling program

Up to 1.5 million gallons of used motor oil may be saved annually in Cincinnati, thanks to an oil recycling program sponsored by the "Cincinnati Experience" in cooperation with the Standard Oil Company of Ohio (Sohio).

Purpose of the program is to give do-it-yourself oil changers (almost 40 per cent of those who own cars) a better way to dispose of old oil than by pouring it in a sewer, body of water or in their backyard.

Under the Cincinnati program, 64 Sohio stations accept the used motor oil for collection by the Keenan Oil Company. It is then recycled for industrial fuel oil, hydraulic oil and for other industrial uses.

Founded in 1969, the "Cincinnati Experience" is an environmental conglomerate of business people, government officials, factory workers, housewives, students and educators affiliated with the University of Cincinnati to apply the institution's resources to municipal problems.

Coal conference slated Sept. 16-17 in Chicago

The fourth annual Illinois Energy Conference on Illinois Coal is scheduled to be held Sept. 16-17 in Chicago's Pick Congress Hotel.

It will bring together leaders of the coal and energy industries, government, universities, research laboratories and citizens' groups to discuss issues such as coal resources; mining and transportation; new technologies; and environmental, social, economic and legal considerations.

For more information write Prof. James Hartnett, Energy Resources Center, University of Illinois at Chicago Circle, Box 4348, Chicago, Ill. 60680.

EPA exhibit opens at Kennedy Space Center

An EPA Bicentennial pavilion exploring the capabilities and limitations of science and technology is now open to the public at the Kennedy Space Center, Fla.

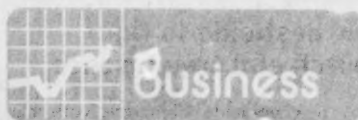
Scheduled to run through Labor Day, the exhibit is part of the U.S. Bicentennial Exposition on Science and Technology and highlights the role of those factors in improving the quality of American life. It specifically deals with correcting environmental errors of the past and preventing them from happening in the future.

Additional MPG info due on '77 autos

Prospective new car buyers will find additional data on the miles per gallon labels that must appear on all 1977 and later model cars.

The new information will consist of the estimated cost of fuel to operate a specific car for one year and the miles per gallon range of other autos in the same class. EPA's proposals would apply to both 1977 and later model cars and light duty trucks.

For example, if a new car's combined mileage figure is 14 mpg, and the cost of a gallon of gas is estimated at 65 cents, and the car is estimated to be driven 10,000 miles per year, the cost of fuel for the car for one year comes to \$464. This amount would appear on the new label.



EPA research may help farmers' profits

The American farmer may end up with a substantial increase in farm earnings thanks to new EPA research into crop damage from air pollution.

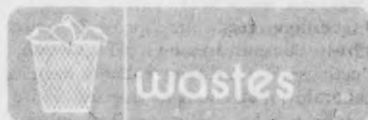
The special program, using methods more closely approximating real-world agricultural conditions than ever before, is investigating such subjects as the impact of (1) atmospheric pollutants on the rate of organic decomposition and the natural production of nitrogen fertilizer in soil; (2) acidic rain on plant nutrients and plant-soil changes; and (3) lead, mercury and cadmium on the growth and metabolism of vegetation and domestic animals.

Results of these and other studies will form the basis for more accurate assessments of the economic damage of air pollution to agriculture, estimated by EPA scientists as ranging from tens to possibly hundreds of millions of dollars lost per year.

Non farm spending on pollution soars by 17%

Nonfarm business in the U.S. spent \$6.5 billion for new plant and equipment to abate air, water, and solid waste pollution in 1975, a 17 per cent increase from the \$5.6 billion spent in 1974.

According to a survey conducted in November and December 1975 by the Bureau of Economic Analysis, an agency of the U.S. Dept. of Commerce, the \$900 million increase in antipollution spending accounted for almost 60 per cent of the \$1.6 billion increase in 1975 total new plant and equipment spending reported in the December survey.



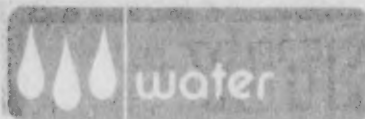
New publication assesses pharmaceutical wastes

A study commissioned by EPA to assess "Hazardous Waste Generation, Treatment and Disposal of the Pharmaceutical Industry" has been released by the Office of Solid Waste Management Programs in Washington.

The study had four basic objectives: to determine the nature and quantities of hazardous wastes originating from the pharmaceutical industry (1973) and to project these wastes to 1977 and 1983; to determine the current treatment and disposal practices within the industry; to examine improved control technologies which could be applied to reduce hazards presented by the wastes; and to calculate the cost of implementing three levels of technology in a typical existing or hypothetical plant.

EPA officials note, however, that the data presented in the report is only the contractor's assessment of the industry's hazardous waste management program and does not necessarily reflect EPA views and policies.

For more information contact the Office of Solid Waste Information Retrieval, U.S. EPA, 1835 K Street N.W., Washington, D.C. 20460.



AWRA sets dates for conference, symposium

The American Water Resources Association will hold its 12th annual conference and a symposium on advances in ground water hydrology in Chicago in September. The conference, with the theme, "Water—Center of Crises—Past, Present and Future," will be held on Sept. 20 and 21. The symposium will follow on Sept. 22 and 23.

Topics to be discussed at the conference include water requirements for energy production, man's impact on the hydrologic cycle, weather modification, interbasin and jurisdictional aspects of water resources, and socioeconomic aspects of water resources.

The symposium will consider subjects such as groundwater movement and well hydraulics, mass and energy transport in porous media, interaction of groundwater with rocks, and groundwater management.

Questions regarding the conference should be addressed to: AWRA Meetings; St. Anthony Falls Hydraulic Laboratory; Mississippi River at Third Avenue, S.E., Minneapolis, Minn. 55414.

\$800,000 granted for Lake Lansing cleanup

A recent federal grant of \$800,000, largest ever to be given nationwide under the Clean Lakes Program, was made recently for the cleanup of Lake Lansing, according to the Michigan Dept. of Natural Resources.

The sum was applied for through the DNR's Inland Lakes Management Unit, which also advises lakefront property owners in restoration project planning and environmental protection needs.

\$70 million certified to protect Huron River

Michigan's Water Resources Commission has certified a \$70 million water pollution control program in Washtenaw County which will protect the Huron River.

Because of ongoing disagreements since 1970 among local units of government along the increasingly-threatened Huron, the commission abandoned a regional interceptor system in the Huron River Valley in favor of a single large treatment plant discharging into Lake

Erie. In addition, the commission divided the region into three separate wastewater planning areas.

Said William G. Turney, chief of the DNR Environmental Protection Bureau, "A final decision by the commission was essential to allow communities to move ahead with final design and construction of pollution control facilities under the grant program."

Corps, EPA to publish wastewater manual

EPA and the Army Corps of Engineers will jointly prepare and publish a planning and design manual for land application of municipal and industrial wastewater. The manual is intended primarily for use by professional engineers and federal and state agencies concerned with land treatment of wastewater.

The two agencies will appoint a work group to establish the scope of information for the manual, select experts to be consulted for specific portions of the document, provide guidance to the contractor, and review the sections of the manual as they are developed.



OK pesticide to fight Dutch elm tree disease

A new pesticide Lignasan BLP, has been approved by EPA for use against highly destructive Dutch elm tree disease, estimated to fell 400,000 elm trees annually according to the U.S. Forest Service.

Produced by the DuPont Company, Lignasan has been approved for use only by trained arborists because special pressurized injection equipment is needed to correctly apply the compound.

Its effectiveness is supported by Elm Research Institute tests last year on some 2,000 healthy and barely-diseased trees in 15 states, including Illinois, Indiana, Michigan and Wisconsin. Roughly 1,000 trees were treated with Lignasan, and 1,000 were not. Among the treated trees, only three per cent succumbed to the blight, while the loss among the untreated trees was 30 per cent.

According to EPA scientists, however, Lignasan is probably not a cure-all. The product is effective in preventing the disease in trees not already infected. It also will usually cure the problem in trees with less than five per cent damage, the scientists say.

'Conditional registration' due for some pesticides

EPA's Office of Pesticide Programs has released a policy statement which will allow new applications for some pesticide products to receive "conditional registrations" while awaiting completion of long-term testing for a full registration.

The statement was signed to resolve a situation which prevented new products identical to already-registered products from receiving EPA registration. Under the 1972 pesticide law, some 35,000 pesticides now registered by EPA must be reviewed and reregistered by October 1977 to ensure their health effects safety.



Wisconsin power plant gets preliminary OK

EPA recently granted preliminary approval for construction of a proposed Wisconsin Electric Power Co. electric generating facility at Pleasant Prairie in Kenosha County.

The proposed WEPCO facility is a 1,160 megawatt coal-fired steam electric generating plant scheduled to begin commercial production in 1980. EPA Region V officials say it is the first such facility to be given preliminary approval for construction in the Region.

'Increasing regulation inevitable' — Train

Administrator Russell Train recently told the National Conference on Regulatory Reform that "increasing regulation is an inevitable, if perhaps unfortunate, by-product of any high technology and high economic growth society with high and rising densities of human populations."

He added that EPA has taken several steps to improve its regulatory processes with these main objectives: to open up the process for effective public participation; to simplify and streamline the regulations; and to ensure that every regulation is really necessary.

Train noted that in a recent review of 125 regulatory initiatives, some 20-25 were either deferred, dropped or proposed in different form by EPA.

News for Government

LOCAL REPORT

Following is a list of communities, jurisdictions, etc., in Region V that received grants from EPA between Mar. 19, 1976 and May 4, 1976. Most of the grants were for sewage treatment projects of one kind or another and totalled \$58,114,126.

ILLINOIS

Alhambra, 4/13, \$1,337; Assumption, 4/19, \$27,150; Barrington, 4/6, \$300; Bonnie Brae-Forest Manor Sanitary District, 3/24, \$42,250; Cairo, 4/27, \$15,450; Carlock, 4/22, \$7,275; Carrier Mills, 4/7, \$13,875; Centralia, 4/20, \$246,150; Cobden, 4/21, \$11,850; Danville Sanitary District, 4/12, \$45,918; Franklin, 3/29, \$2,250; Glendale Heights, 3/22, \$73,725; Grand Ridge, 3/22, \$7,125; Illiopolis, 3/31, \$16,050; Jerseyville, 3/30, \$95,550; Kansas, 3/22, \$14,850; Lincoln, 3/31, \$188,475; Moline, 3/29, \$789,225; Metropolitan Sanitary District of Chicago, 4/15, \$8,693,550; New Braden, 4/15, \$18,300; Pierron, 3/30, \$8,850; Piper City, 4/30, \$13,650; Roanoke, 4/27, \$7,500; Rushville, 4/30, \$33,825; Tower Hill, 4/19, \$900; Trenton, 4/30, \$6,800; Wauconda, 3/25, \$58,200. Illinois total: \$10,460,380.

INDIANA

Advance, 3/31, \$11,175; Andrews, 3/31, \$6,750; Berne, 4/20, \$2,900; Brooklyn, 4/12, \$77,175; Burlington, 3/31, \$10,275; Camden, 3/24, \$24,101; Clay City, 4/28, \$109,125; Decatur, 4/15, \$29,400; Fort Branch, 4/15, \$9,000; Fortville, 3/31, \$6,225; Gosport, 4/29, \$16,500; Greenfield, 4/30, \$125,250; Greenwood, 4/15, \$2,625; Hartford City, 3/31, \$12,000; Hebron, 4/14, \$10,050; Hudson, 4/29, \$4,650; Huntingburg, 4/28, \$10,284; Indianapolis, \$7,932,225; Kendallville, 4/30, \$28,125; La Grange, 4/30, \$22,650; Marshall, 4/27, \$6,525; Maysville Regional Sewer District, 3/25, \$19,500; Mentone, 3/31, \$11,325; Morgantown, 4/13, \$4,750; North Webster, 4/28, \$244,200; Purdue University, 4/22, \$146,160; Remington, 3/31, \$26,700; Richmond Regional Sanitary District, 4/14, \$1,050; Rising Sun, 4/5, \$238,725; Riverhaven Sanitary District, 4/29, \$7,500; Scott County Regional Sewer District, 3/31, \$7,500; Selma, 4/30, \$93,825; Sweetser, 4/28, \$203,025; Waterloo, 5/3, \$1,875. Indiana total: \$9,465,145.

MICHIGAN

Antrim County Bureau of Public Works, 4/15, \$63,150; Bark River, 4/21, \$4,125; Barry County Dept. of Public Works, 4/14, \$55,500; Bay City, 4/30, \$545,720; Beaverton, 4/13, \$6,600; Blissfield, 4/30, \$15,000; Calhoun County Bureau of Public Works, 3/22, \$136,950; Caro, 4/19, \$41,175; Carsonville, 4/12, \$4,125; Charlevoix, 4/30, \$18,750; Charlotte, 4/14, \$46,375; Chesaning, 3/31, \$1,725; Clinton County Dept. of Public Works, 4/22, \$12,975; Clinton, 3/25, \$87,000; Crosswell, 4/29, \$25,500; Crystal, 3/25, \$57,825; Delhi Charter, 3/23, \$4,500; Detour, 4/20, \$2,850; Fairfield, 3/31, \$3,000; Forsyth, 4/6, \$8,775; Fowlerville, 3/30, \$15,000; Gobles, 4/29, \$24,075; Grand Rapids, 4/7, \$13,650; Grant, 4/30, \$18,750; Gratiot County Dept. of Public Works, 4/15, \$15,975; Grattan, 3/31, \$20,625; Grayling, 3/25, \$46,125; Green

Oak, 3/31, \$25,875; Interior, 4/30, \$4,000; Jackson County Bureau of Public Works, 4/30, \$3,663,150; Kent City, 4/15, \$19,275; Lake Odessa, 4/8, \$68,400; Leighton, 4/14, \$7,500; Lenawee County Drainage Commission, 4/14, \$57,900; Luce County Dept. of Public Works, 4/15, \$38,775.

Mackinaw, 4/30, \$18,525; Macomb County Health Dept., 4/1, \$24,400; Marlette, 4/21, \$4,875; Michigan Water Resources Commission, 4/6, \$134,014; Minden City, 4/13, \$3,750; New Baltimore, 4/22, \$103,275; Northport, 3/25, \$21,000; Peck, 3/31, \$5,100; Port Hope, 4/30, \$3,750; Roscommon, 4/14, \$34,415; Saginaw County Dept. of Public Works, 4/8, \$7,275.

Somerset, 4/30, \$115,500; South Lyon, 4/12, \$143,550; Southern Clinton County Sanitary District, 4/15, \$40,050; St. Ignace, 4/21, \$17,850; St. Joseph County Bureau of Public Works, 4/15, \$38,850; St. Louis, 4/19, \$6,975; Stockbridge, 3/31, \$11,250; Tawas City, 4/26, \$59,175; Tuscarora, 3/23, \$36,000; Union, 4/29, \$52,350; Van Buren County Road Commission, 4/30, \$52,575; Vicksburg, 4/30, \$52,575; Washtenaw County Dept. of Public Works, 4/16, \$486,450. Michigan total: \$6,676,374.

MINNESOTA

Benton County, 3/26, \$19,350; Breezy Point, 4/30, \$31,815; Caledonia, 4/7, \$26,875; Dakota, 3/26, \$5,475; Dover-Eyota-St. Charles Sanitary District, 4/7, \$486,900; Fountain, 4/22, \$5,700; Hamburg, 4/28, \$12,750; Lakefield, 3/31, \$27,465; Metro Waste Control Commission, 4/20, \$2,110,875; Monticello, 3/29, \$77,025; Nelson, 4/26, \$128,175.

New Auburn, 3/30, \$1,624; Rockford, 4/19, \$13,275; Sartell, 3/30, \$23,100; South International Falls, 4/30, \$38,400; St. Stephen, 3/25, \$10,575; Wahnkon, 4/23, \$1,282; Walker, 3/26, \$59,951; Watertown, 4/22, \$13,275. Minnesota total: \$3,093,887.

OHIO

Ada, 4/29, \$5,451,989; Bloomingburg, 4/9, \$81,750; Canton Health Dept., 4/2, \$250,449; Cincinnati, 4/27, \$482,499; Columbus, 4/30, \$646,950; Empire, 4/19, \$6,075; Fort Jennings, 4/14, \$33; Gratis, 4/22, \$9,600; Guernsey County Board of Commissioners, 4/29, \$55,800; Malinta, 4/20, \$6,750; Mansfield-Richland County Highway Dept., 3/29, \$33,530;

Medina, 3/25, \$17,472,225; Montgomery County, 4/29, \$100,725; Navarre, 4/29, \$10,425; New Knoxville, 4/29, \$335,025; Portsmouth Health Dept., 3/30, \$99,100; Prospect, 4/30, \$141,375; Reynoldsburg, 3/31, \$11,475; Thurston, 3/31, \$62,100; Tiffinsville, 4/29, \$4,500; Westerville, 4/28, \$915,150; Wood County, 4/21, \$114,900; Youngstown, 4/22, \$595,596. Ohio total: \$26,888,071.

WISCONSIN

Antigo, 3/26, \$57,675; Augusta, 3/26, \$37,575; Belmont, 3/30, \$8,475; Cameron, 3/29, \$14,925; Casco, 4/7, \$268,425; Cedar Grove, 4/21, \$1,516; Eau Claire, 4/23, \$19,300; Frederic, 4/29, \$21,825; Hixton, 4/7, \$8,475; Kenosha, 5/4, \$47,218; Kewaunee, 4/9, \$2,210.

Lomira, 4/29, \$11,100; Norway Sanitary District No. 1, 3/30, \$20,325; Rhinelander, 4/9, \$30,075; Superior, 4/6, \$299,475; West Bend, 4/23, \$639,675; Wisconsin Dept. of Natural Resources, 3/24, \$42,000. Wisconsin total: \$1,530,269.

Following is a list of communities, jurisdictions, etc., in Region V that received grants from EPA between May 5 and June 14, 1976. Most were for sewage treatment projects of one kind or another and totalled \$96,875,802.

ILLINOIS

Aledo, 5/27, \$10,500; Alexis, 5/19, \$21,975; Annawan, 5/13, \$11,550; Ashton, 6/4, \$2,100; Aviston, 5/18, \$4,820; Bartlett, 5/25, \$14,250; Bryant, 5/27, \$20,025; Carbondale, 5/26, \$96,000; Collinsville, 6/3, \$47,550; Cook County Dept. of Environmental Control, 5/7, \$323,560; Elwood, 5/18, \$51,188; Enfield, 6/2, \$13,500; Farmington Sanitary Dist., 5/17, \$62,475.

Fillmore, 5/5, \$3,000; Glen Carbon, 6/2, \$12,075; Highland, 5/11, \$40,000; Humboldt, 6/1, \$900; Illinois EPA, 5/28, \$1,471,000; State of Illinois, 5/21, \$234,900; Knoxville, 6/8, \$20,171; Macon Sanitary Dist., 5/19, \$22,450; Mansfield, 5/27, \$11,250; Minonk, 5/19, \$375; Metropolitan Sanitary Dist. of Chicago, 6/9, \$1,692,026; Philo, 5/7, \$6,675.

Rankin, 5/25, \$7,725; Ridge Farm, 5/26, \$9,225; Rockford Sanitary Dist., 5/12, \$3,155,475; Rosiclare, 6/9, \$8,850; Salem, 6/3, \$7,950; Scales Mound, 5/27, \$3,000; Sheffield, 5/7, \$7,125; St. Clair Township, 5/18, \$205; St. Anne, 5/25, \$11,325; Walnut, 5/11, \$7,725; Waterman, 5/10, \$11,475. Illinois total: \$7,446,595.

INDIANA

Anderson Dept. of Air Pollution Control, 5/20, \$17,734; Batesville, 5/13, \$99,750; Carlisle, 5/21, \$5,025; Churubusco, 6/9, \$28,500; East Chicago Air Pollution Control District, 5/7, \$61,893; Francesville, 5/20, \$17,100; Gas City, 6/7, \$41,175; Geneva, 5/27, \$24,825; Greenwood, 5/6, \$3,745; Hamilton Lake, 6/8, \$21,750; Hartsville, 5/25, \$4,875; Holton, 5/20, \$7,125.

Huntertown, 6/10, \$12,600; Indiana Stream Pollution Control Board, 5/28, \$965,100; Indianapolis Dept. of Public Works, 5/6, \$153,600; Indianapolis, 5/28, \$3,570,300; Jackson County Sanitary Dist., 5/28, \$37,500; Kennard, 5/28, \$27,225; Larwill, 5/27, \$9,375; Millersburg, 5/27, \$11,850; Monroe, 5/6, \$17,700; Morocco, 6/10, \$14,100; Newburgh, 6/8, \$1,319.

Ossian, 5/7, \$24,150; St. Joseph County Health Dept., 5/20, \$40,000; Vigo County Health Dept., 5/6, \$13,000; Wingate, 6/10, \$9,075; Wolcott, 5/27, \$5,625; Zionsville, 5/27, \$27,225. Indiana total: \$5,273,241.

MICHIGAN

Allegan County Dept. of Public Works, 5/25, \$10,219; Alma, 5/24, \$75,934; Au Gres, 5/18, \$500; Bear Lake, 6/4, \$58,575; Berrien County Dept. of Public Works, 5/17, \$1,517,025; Briley, 5/7, \$8,325; Cadillac, 5/21, \$48,900; Calhoun County Board of Public Works, 5/25, \$22,575; Cass County Bureau of Public Works, 5/7, \$96,825; Central Upper Peninsula Planning Commission, 5/28, \$73,900.

Charlotte, 6/10, \$1,875; Clinton, 6/3, \$17,250; Crystal Lake Area Sewage Disposal Authority, 5/19, \$104,100; Delta Charter, 5/14, \$51,000; Eastern Upper Peninsula Planning Commission, 5/28, \$40,500; Farmington, 5/27, \$44,800; Fife Lake, 5/20, \$5,625; Genesee County, 5/25, \$8,475; Gratiot County Dept. of Public Works, 5/11, \$1,104; Grosse Ile Sanitary Dist., 5/27, \$266,400.

Hart, 5/12, \$9,075; Imlay City, 5/14, \$81,300; Ingham County, 5/27, \$20,775; Iron Mountain-Kingsford, 5/14, \$5,408; Lyon, 5/20, \$33,825; Marquette, 5/13, \$39,825; Marshall, 6/9, \$25,370; Marysville, 5/5, \$50,117; McBain, 5/19, \$9,375; McBrides, 5/17, \$9,375; Michigan Dept. of Public Health, 5/21, \$263,733; Monroe County Drainage Commission, 5/28, \$44,700.

Muskegon County Bureau of Public Works, 5/26, \$26,250; Northeast Michigan Planning and Development Com-

mission, 5/28, \$53,200; Northwest Michigan Planning and Development Commission, 5/28, \$77,200; New Era, 5/11, \$6,450; Niles, 5/12, \$965; Norway, 5/21, \$112,725; Oakland County Dept. of Public Works, 6/3, \$20,979; Onkema, 5/26, \$7,802.

Pere Marquette, 5/26, \$18,000; Pewamo, 6/3, \$14,325; Port Huron, 5/28, \$7,345,800; Richmond, 5/27, \$30,075; Romeo, 5/18, \$5,250; Sandusky, 6/3, \$18,975; Southgate-Wyandotte Relief, 5/13, \$86,243; Southwestern Michigan Regional Planning Commission, 5/28, \$103,500; Springvale-Bear Creek Sanitary Dist., 5/5, \$6,600; Sunfield, 5/14, \$11,250.

Van Buren County Regional Development Commission, 5/10, \$28,040; Vicksburg, 5/12, \$226; Washtenaw County Dept. of Public Works, 5/12, \$4,103; Watertown, 5/20, \$24,750; Wayne County, 5/27, \$1,897,590; Western Upper Peninsula Planning and Development Region, 5/28, \$51,700; Wixom, 5/27, \$27,825; Yates, 5/19, \$41,250. Michigan total: \$13,087,860.

MINNESOTA

Alexandria Lake Sanitary District, 5/26, \$1,515,383; Buffalo, 5/25, \$65,250; Comfrey, 6/7, \$21,525; Jordan, 5/13, \$22,800; Litchfield, 5/12, \$4,138; Madison, 5/21, \$3,096; Metropolitan Waste Control Commission, 6/8, \$1,510,996; Minnesota Dept. of Agriculture, 6/2, \$87,487; Minnesota Dept. of Health, 5/21, \$141,200; Minnesota Pollution Control Agency, 6/7, \$912,472.

Nelson, 5/28, \$52; Rochester, 6/1, \$55,237; St. Cloud, 6/9, \$91,182; Thief River Falls, 6/9, \$28,980; Twin Cities Metropolitan Waste Control Commission, 5/27, \$28,641,450; Western Lake Superior Sanitary Dist., 5/21, \$17,294,500. Minnesota total: \$50,398,798.

OHIO

Ashley, 5/6, \$188,700; Clermont County Board of Commissioners, 5/28, \$8,030,175; Cleves, 5/14, \$140,925; Columbus, 6/10, \$2,727,800; Dillonvale, 5/14, \$6,750; Dover, 5/28, \$10,800; Eastgate Development and Transportation Agency, 6/7, \$59,963; Findlay, 5/27, \$233,625; Fulton County Board of Commissioners, 5/17, \$40,275; Grand Rapids, 5/10, \$1,140,775; Haskins, 6/11, \$78,075.

Middle Point, 5/19, \$225; Monroe, 5/25, \$33,300; Ney, 5/26, \$7,650; Niles, 5/27, \$68,025; State of Ohio, 5/21, \$260,000; Painesville, 6/10, \$196,725; Swanton, 5/28, \$1,469,550; Trumbull County, 5/26, \$101,925; Wauseon, 5/26, \$21,750; Yorkville, 5/25, \$7,125. Ohio total: \$14,932,588.

WISCONSIN

Black Creek, 5/24, \$78,400; Brandon, 5/7, \$18,000; DePere, 5/27, \$2,032,800; Dickeyville, 5/26, \$8,775; Douglas County Health Care Facility, 5/27, \$3,750; Elroy, 5/13, \$22,200; Greenwood, 5/6, \$8,325; Hortonville, 5/19, \$97,575.

Lomira, 6/9, \$271; Luxemburg, 6/9, \$5,354; Madison Metropolitan Sewage Dist., 5/27, \$277,725; Milan Sanitary Dist., 5/6, \$3,525; Milwaukee County Metropolitan Sanitary Dist., 5/13, \$687,750; Necedah, 5/28, \$19,898; North Fond du Lac, 5/25, \$146; Orfordville, 5/6, \$10,950;

Peshtigo, 5/6, \$534,710; Ridgeland, 5/10, \$3,184; River Falls, 5/28, \$63,570; Salem Utility District No. 2, 5/27, \$41,850; Seymour, 6/9, \$54,450; Stoddard, 5/18, \$11,775; Sussex, 6/8, \$213,900; Wisconsin Dept. of Natural Resources, 5/28, \$1,068,166; State of Wisconsin, 6/7, \$469,289. Wisconsin total: \$5,736,720.

FEDERAL REGISTER

MAY 3

Rules

Maintenance of National ambient air quality standards

MAY 4

Rules

Air pollution; standards of performance for new stationary sources:

Ferroalloy production facilities

Proposed Rules

Air quality implementation plans, various States, proposed, etc.:

Virginia

Notices

Meetings:

Air Quality Criteria Advisory

National Committee

Science Advisory Board, Ecology Advisory Committee

Science Advisory Board, Hazardous Materials Advisory Committee

MAY 5

Rules

Air quality implementation plans, various States, etc.:

Circumstances under which variance may be submitted

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

O-O-Diethyl S-(2-(ethylthio) ethyl) phosphorodithioate

Notices

Pesticide chemicals, etc.; petitions:

Arbo Products Co., Inc

Pesticide programs:

Pesticide product entailing a changed use pattern, approval of application to register

Pesticide product containing a new active ingredient, receipt of application to register

MAY 6

Rules

Air quality implementation plans; various States, etc.:

Indiana

Water pollution; effluent guidelines for certain point source

categories:

Hospitals

Proposed Rules

Water pollution; effluent guidelines for certain point source categories:

Hospitals

Notices

Air pollution; ambient air monitoring reference and equivalent methods

Pesticide chemicals, etc.; petitions:

Abbott Lab (2 documents)

BASF Wyandotte Corp

Ciba-Geigy Corp

E. I. duPont de Nemours & Co

FMC Corp., et al

Penwalt Co

Rohm & Haas Co

Southeastern Fruit & Tree Nut Research Station

Pesticides, specific exemptions and experimental use permits:

Albany International Co

Elanco Products Co

Zoecon Corp.; methoprene on mosquitoes

Water pollution prevention and control; addition to list of categories of sources:

Hospitals

MAY 7

(No Listings)

MAY 10

Rules

Air quality implementation plans, various States, etc.:

Kentucky

Procurements for experimental, developmental, or research work

Proposed Rules

Air quality implementation plans, various States, etc.:

Philadelphia, Pa

Notices

Air quality implementation plans:

Indirect heat exchangers; compliance schedules for Kentucky

MAY 11

Rules

Air quality implementation plans; various States, etc.:

Alabama

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Picloram

MAY 12

Rules

Air quality implementation plans; various States, etc.:

District of Columbia

Water pollution; effluent guidelines for certain point source categories:

Organic chemicals manufacturing

Notices

Food additive petitions:

Chemagro Agricultural Division,

Mobay Chemical Corp. et al

New stationary sources, performance standards; revised comment summary for modification, etc

Pesticide applicator certification; State plans:

Nevada

Pesticide chemicals, etc.; petitions:

Ciba-Geigy Corp

PPG Industries, Inc

Pesticide registration, applications (3 documents-19368, 19369,

Pesticides, specific exemptions and experimental use permits:

Bayvet Corp., o,o-diethyl O-(3-chloro-4-methyl-2-oxo-2H-1-benzopyran-7-yl) on sheep

Department of Interior, methiocarb on cherry trees

Mississippi State University, terramycin on elm trees

Mobil Chemical Co., ethroprop on beans, etc

Monsanto Agricultural Products Co., alachlor/atrazine on corn (2 documents)

New Mexico Department of Agriculture; ronnel and dimethoate to suppress fleas

The Upjohn Co., N-(2, 4-dimethyl-phenyl)-N-[[2, 4-dimethyl-phenyl] imino] methyl]-N-methanimidamide on apples and pears (2 documents)

Phosphate fertilizer plants, draft guidelines, availability

MAY 13**Rules**

Air pollutants, hazardous, National emission standards:

Massachusetts; authority delegation

New Hampshire; authority delegation

Air pollution, standards of performance for new stationary sources:

Massachusetts; authority delegation

New Hampshire; authority delegation

Water pollution; effluent guidelines for certain point source categories:

Coal mining

Proposed Rules

Air quality implementation plans; various states, etc.:

Virgin Islands

Energy related authority:

Iowa (2 documents)

Kansas (2 documents)

Missouri (2 documents)

Water pollution; Effluent guidelines for certain point source categories:

Coal mining

Notices

Air pollutants, hazardous; National emission standards:

Massachusetts; authority delegation

New Hampshire; authority delegation

Air quality implementation plans:

West Virginia

Pesticide applicator certification; State plans:

Arizona et al

Florida

Pesticide registration:

Applications

Pesticides, specific exemptions and experimental use permits:

Elanco Products Co.; trifluralin, etc. on soybeans

Hercules Inc.; dialifor on walnuts

U.S. Borax Research Corp.;

herbicide on sunflowers, peas, etc

Water pollution control:

Categories of sources; additions (2 documents)

MAY 14**Rules**

Air quality implementation plans, various States, etc.:

Florida

Proposed Rules

Air quality implementation plans, various States, etc.;

correction:

South Dakota

Notices

Pesticide chemicals, etc.; petitions:

Avitrol Corp

Pesticide products containing heptachlor or chlordane; hearing

Pesticides, specific exemptions and experimental use permits:

Elanco Products Co.; herbicide trifluralin etc. on peanuts

Mobile Chemical Co.; insecticides on sweet potatoes, etc

Rohm & Haas Co.; herbicides on soybeans and corn (2 documents)

MAY 17**Notices**

Environmental statements; availability of agency comments

Pesticide programs:

Appointment of Advisory Committee on Leptophos

MAY 18**Rules**

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Benomyl

Chlorpyrifos

Water pollution; effluent guidelines for certain point source categories:

Carbon black

Gum and wood chemicals

Water pollution; effluent guidelines for certain point source

categories:

Chemicals, organic; correction

Proposed Rules

Water pollution; effluent guidelines for certain point source categories:

Carbon black manufacturing

Gum and wood chemical manufacturing

Notices

Pesticide registration:

Applications (2 documents)

Pesticides, specific exemptions and experimental use permits:

Elanco Products Co

PPG Industries, Inc. (3 documents)

Sandoz, Inc

MAY 19**Rules**

Water pollution; effluent guidelines for certain point source categories:

Phosphate

MAY 20**Rules**

Air pollution; standards of performance for new stationary sources; correction

Federal and federally-assisted programs and projects; cooperation with state and local governments

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Oxamyl

Water pollution; effluent guidelines for certain point source categories; manufacturing, processing, etc.:

Explosives

Proposed Rules

Air quality implementation plans, various States, etc.:

West Virginia

Water pollution; effluent guidelines for certain point source categories:

Explosives

Notices

Water pollution control; discharge of pollutants:

Virgin Islands; public hearings and requests for program approval

MAY 21**Proposed Rules**

Air quality implementation plans, various States, etc.:

New Jersey

Motor vehicle fuel economy; 1977 model year

Notices

Pesticide registration:

Applications

Pesticides, specific exemptions and experimental use permits:

Elanco Products Co.; oryzalin on tobacco

ICI United States Inc.; insecticides on ornamental turf

MAY 24**Rules**

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Benomyl; correction

2-Methyl-4-chlorophenoxyacetic acid

Water pollution; effluent guidelines for certain point source categories:

Ore mining

Proposed Rules

Air pollution control, new motor vehicles and engines:

Heavy duty engine regulations for 1979 and later model years

Notices

Pesticide applicator certification; State plans:

Tennessee

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

O-Ethyl S, S'-diphenyl phosphorodithioate

Pesticide programs:

State registration to meet special local needs; interim certification, various States

MAY 25

Rules

Air quality implementation plans:

Maintenance of national standards

Air quality implementation plans; various States, etc.:

Washington

Registration of fuels and fuel additives

Proposed Rules

Air quality implementation plans, various states, etc.:

New York

Notices

Health risk and economic impact assessments of suspected carcinogens; interim procedures and guidelines

Pesticide applicator certification; State plans:

Pennsylvania

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions; etc.:

Methanesulfonate

MAY 26

Rules

Air pollution; standards of performance for new stationary sources:

California; authority delegation (2 documents)

Notices

Air pollution; standards of performance for new stationary sources; and National emission standards:

California; authority delegation

Marine sanitation device standard:

California

Pesticide programs:

Registration of products containing chlorobenzilate

Pesticides, specific exemptions and experimental use permits:

Chevron Chemical Co.; acephate for household spot ments

Elanco Products Co.; fungicide on grapes

Forest Service; insecticides in urban and forest situations

Mobile Chemical Co.; bifenox on tobacco

Olin Chemicals; calcium hypochlorite in swimming pools

MAY 27

Rules

Air quality implementation plans; various states, etc.:

Alabama

Water pollution; effluent guidelines for certain point source categories:

Iron and steel

Proposed Rules

Air pollution; standards of performance for new stationary sources:

Iron and steel manufacturing

Air quality implementation plans; various states:

Wyoming

Notices

Environmental statements; availability of agency comments

Pesticide chemicals, etc.; petitions:

E. I. DuPont de Nemours and Co

Pennwalt Corp

Chevron Chemical Co

Pesticide programs:

Policy statements; data requirements for registration

Pesticide registration:

M-44 sodium cyanide capsules to control predators

Pesticides, specific exemptions and experimental use permits:

Agriculture Department

Agriculture Department; Nosema locustae

Rohm and Haas Co

Texas A&M University

MAY 28

Proposed Rules

Motor vehicle fuel economy; 1977 model year; correction

Notices

Pesticide registration:

Octamethylpyrophosphoramide; cancellation

JUNE 1

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

2-Methyl-4-Chlorophenoxyacetic Acid

Notices

Pesticide chemicals, etc.; petitions:

Chapman Chemical Co. et al

JUNE 2

Notices

Pesticide applicator certification; State plans:

New Hampshire

Pesticide programs:

Trichloromethane

Pesticide registration:

Applications

JUNE 3

Rules

Air quality implementation plans, various States, etc.:

Florida; correction

Nebraska

Notices

Exposure limits; Carlsbad Caverns; interim recommendations

Municipal sludge management; technical bulletin

Pesticide applicator certification; State plans:

Iowa, et al

Puerto Rico

Virgin Islands

Pesticide chemicals, etc.; petitions:

Dow Chemical Co

Pesticide registration:

Applications

Pesticides; specific exemptions and experimental use permits:

Abbott Laboratories; plant regulator on oranges

AGSCO Agricultural Division; fungicide/insecticide

combination on wheat and barley seeds

Avitrol Corp.; bird repellent on sorghum

Chemagro Agricultural Division; fungicide on rice

Chevron Chemical Co.; insecticide acephate on forest areas

Creative Sales, Inc.; insecticide acephate on ornamental

trees

Interior Department; avicide 3-chloro- p toluidine

hydrochloride in herring gulls and great black-backed gulls

Lowden Inc.; fungicide nystatin on elm and maple trees

Mobil Chemical Co.; insecticide ethoprop on tobacco

PPG Industries, Inc.; fungicide sodium azide on peanuts

Sandoz, Inc.; insecticides elcar and chlordimeform on

cotton

Sellers Chemical Corp.; fatty alcohols on tobacco

Thompson-Hayward Co.; insecticide on forests

Union Carbide Corp.; insecticide carbaryl on cotton

JUNE 4

(No Listings)

JUNE 7

Rules

Air quality implementation plans:

Maintenance of National standards

Proposed Rules

Air quality implementation plans; various States, etc.:

Alaska

Notices

Air pollutants, hazardous; National emission standards:

Washington, State of

Meetings:

Effluent Standards and Water Quality Information

Advisory Committee

Pesticide chemicals in or on raw agricultural commodities;

temporary tolerances:

Carbaryl

Parathion

JUNE 8

Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

N-(1-ethylpropyl) -3, 4 -dimethyl - 2,6 - dinitroben -
zenamine
Toxaphene

Proposed Rules

Standards of performance for new stationary sources; reference methods

Notices

Food additive petitions:

Ansul Co

Pesticide programs:

Applications (2 documents)

Pesticides, specific exemptions and experimental use permits:

Agriculture Department; Malathion for black grass bugs in Ariz
California Department of Health; DDT for fleas
Montgomery County, Md.; aquifer
Montana Department of Livestock; Strychnine for rabid skunks
Texas State Department of Agriculture; sodium chlorate for desiccation of flax

JUNE 9

Rules

Air quality implementation plans:

Idaho

Proposed Rules

Air quality implementation plans; various States, etc.:

Delaware

Notices

Aerosol cans containing vinyl chloride; recommended procedures for disposal

Ambient air monitoring reference and equivalent methods; receipt of application

Chloralkylene fluids as dielectric fluids; opinion regarding use
Polydimethylsiloxane fluids as coolants for use in transformers; opinion regarding use

JUNE 10

Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Parathion or its methyl homolog

Propargite

Terbacil

2,4-D

Water pollution; effluent guidelines for certain point source categories:

Mineral mining and processing

Proposed Rules

Toxic pollutants; effluent standards

Water pollution; effluent guidelines for certain point source categories:

Mineral mining and processing

Notices

Pesticide registration:

Applications (6 documents)

Renewal and establishment of a temporary exemption from the requirement of a tolerance

JUNE 11

Rules

Air quality implementation plans:

Maryland; parking management regulations, correction

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Endothall

Notices

Meetings:

State-Federal Water Programs Advisory Committee

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

N-[[[(4-chlorophenyl) amino] (carbonyl)] 2, 6-
difluorobenzamide

Pesticide programs:

Registering pesticides; presumption against

Pesticide registration:

Applications (2 documents)

Pesticides, specific exemptions and experimental use permits:

Arizona University

Cities Service Co

Fisons Corp

GAF Corp

Mobay Chemical Corp, (2 documents)

Sellers Chemical Corp

JUNE 14

Proposed Rules

Energy-related authority; compliance date extension:

Kansas

New York

Notices

Pesticide chemicals, etc.; petitions:

Certain companies

Pesticides, specific exemptions and experimental use permits:

Agriculture Department (2 documents)

BASF Wyandotte Corp

JUNE 15

Rules

Air pollution; standards of performance for new stationary sources:

Utah, authority delegation

Notices

Authority delegation:

Utah; standards of performance for new stationary sources

Food additive petitions:

Mobay Chemical Corp

Pesticide chemicals, etc.; petitions:

Mallinckrodt, Inc

Pesticide registration:

Applications

Toxic pollutant effluent standards; availability of report

JUNE 16

Proposed Rules

Toxic pollutants; effluent standards; correction

JUNE 17

Rules

Air quality implementation plans; various States, etc.:

Oregon

Puerto Rico

Notices

Marine sanitation device standard:

New York

Pesticide programs:

Cancellation of registration of pesticide products containing chlordecone (kepone)

JUNE 18

Rules

Air quality implementation plans:

Development of area plans

National Pollutant Discharge Elimination System:

Silvicultural activities

Notices

Low emission vehicles; intent to submit an application for certification

Pesticides; specific exemptions and experimental use permits:

Chevron Chemical Co

Elanco Products Co

Magna Corp

Nor-AM Agricultural Products, Inc

JUNE 21

Rules

Air quality implementation plans: various States, etc.:
Georgia

Pesticide chemicals in or on raw agricultural commodities;
tolerances and exemptions, etc.:
Bacillus Thuringiensis, Berliner

Proposed Rules

Air quality implementation plans:
Georgia

Notices

Air pollutant, hazardous, National emission standards:
Georgia; authority delegation

JUNE 22

Rules

Pesticide chemicals in or on raw agricultural commodities;
tolerances, exemptions, etc.:
Propargite

Water pollution; Arizona standards

Proposed Rules

Energy related authority:

Georgia

North Carolina

Notices

Meetings:

National Drinking Water Advisory Council

JUNE 23

Rules

Air quality implementation plans; various States, etc.:

Nebraska

North Carolina

Water pollution; effluent guidelines for certain point source
categories:

Phosphate rock, phosphoric acid, and sodium phosphates

Proposed Rules

Grants for construction of treatment works; mandatory value

engineering

Pesticide chemicals in or on raw agricultural commodities;
tolerances and exemptions, etc.:

Carbaryl

Notices

Environmental statements; availability of agency comments

JUNE 24

Notices

Air quality implementation plans:

Ambient air quality standards; monitoring reference
designations, etc

Meetings:

Science Advisory Board, Environmental Measurements
Advisory Committee

Science Advisory Board, Technology Assessment and
Pollution Control Advisory Committee

Pesticides, specific exemptions and experimental use permits:

Amchem Products, Inc

Hoffman-La Roche Inc

Shell Chemical Co

Stauffer Chemical Co

University of Idaho Cooperative

Extension Service

Upjohn Co

U.S. Forest Service

JUNE 25

Notices

Pesticide chemicals, etc; petitions:

Dow Chemical Co., et al

Pesticide registration:

West Virginia; certification of commercial and private
applicators

Radiation levels:

Interim recommendations on Florida phosphate lands

* U.S. Government Printing Office: 1976 - 650-516 P.O.: NO. 10/Regional V-1.

ENVIRONMENT MIDWEST
ENVIRONMENTAL PROTECTION AGENCY

Office of Public Affairs

230 South Dearborn

Chicago, Illinois 60604

THIRD CLASS

POSTAGE AND FEES PAID
ENVIRONMENTAL PROTECTION AGENCY

EPA-335



Return this sheet if you do NOT wish to receive this material, or if a change of address is needed. (Indicate change, including zip code.)



Environment Midwest

REGION V
UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY

AUGUST 1976

Monitoring Minorities
Page 3

Be sure to save
Page 5

Marquette town meeting
Page 6

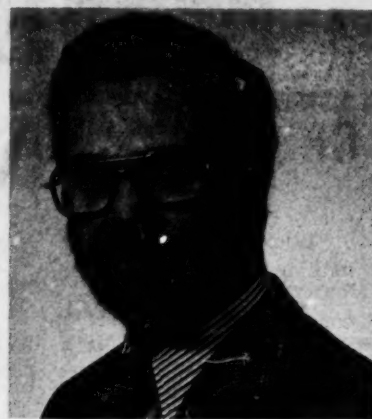
Cleveland's air problems
Page 8

**New
Public
Affairs
Telephone
Number
Is**

(312) 353-2072



A report on Region V Enforcement Activities



GEORGE R. ALEXANDER JR.

I think it is appropriate to report to the readers of "Environment Midwest" on the enforcement actions that U.S. EPA Region V has taken in the four months from March through June 1976. Formal enforcement actions are the last step in a series of measures that can be used to clean up pollution.

These begin with the issuance of a permit or another form of commitment to control discharges or emissions, and range through establishment of compliance schedules and requests for information on how a facility is doing in meeting its obligations.

There are several kinds of enforcement actions, from convening informal meetings to establishing compliance schedules to lawsuits. In many cases, state and local agencies have been able to get companies or municipalities to agree to compliance schedules through procedures at their level of government. In others, EPA has had to serve formal federal notices of violation.

In order to control air pollution in the most expeditious manner possible, we have issued notices of violation and taken other actions that affect both municipalities and industry. For example, we issued a notice of violation and, subsequently, enforcement orders, to Hamilton County, Ohio, and the State of Ohio in order to correct oxidant (or smog) problems in the greater Cincinnati area.

All new sources of air emissions must meet "New Source Performance Standards" (NSPS) if they are in one of the categories for which such standards have been promulgated (there are 24 so far.) These embody the best control technology the industry has shown it can meet. In addition, new sources must undergo "new source review" at the state level.

If a proposed plant is in an area where the primary, health-related ambient air quality standards are not being met, it could be required to meet emission limitations that are stricter than the NSPS. We filed the first civil suit in the country based on the NSPS against the City of Painesville, Ohio, which planned to begin operating a new power plant without being in compliance with the standards.

Similar actions have involved the Central Illinois Light Co. near Peoria, and major steel mills in In-

diana and Ohio.

Enforcement actions have been taken against dozens of major existing pollution sources of sulfur oxides in the region to make sure that they begin active programs to abate air emissions. What must be understood by industry is that existing sources must clean up if there is to be sufficient clean air to allow new growth to take place.

In the area of water pollution control, we have taken hundreds of actions, ranging from issuance of administrative orders to referrals to the Department of Justice. When a state has received authority to issue permits under section 402 of the Federal Water Pollution Control Act, it has the primary responsibility to enforce compliance with the terms of the permits.

U.S. EPA has aided states in their enforcement actions and frequently taken enforcement actions of its own where they were needed.

Region V issued the first notices of violation in the country to a municipality (and to the state which issued its permit) for insufficient operation and maintenance of a city-owned sewage treatment plant. Subsequently, the city and state promptly took action to correct the problem. We have worked closely with the State of Michigan in fashioning an appropriate enforcement remedy to ameliorate problems in Detroit, the largest discharger to the Great Lakes of certain critical pollutants, specifically, phosphorous. We are working to ensure that the city is placed on a cleanup schedule that will achieve secondary treatment and phosphorous removal in the shortest possible time.

The states in Region V that have the authority to issue and enforce permits have instituted effective compliance tracking and enforcement programs. U.S. EPA works closely with them in an overview and advisory capacity. I think that the system is working very well, and is producing active state enforcement programs. Both the states in this Region and U.S. EPA will continue to pursue enforcement measures where necessary, to ensure establishment of reasonable and effective compliance schedules and see that they are met.

Monitoring Minorities

CRUA keeps close watch on government contractors

BY PHYLLIS KIERIG

"Why isn't a woman home making babies?"

"What's a woman doing on the construction site?"

The hardhats aren't shy about asking Lucy Rodriguez the kinds of questions she has asked herself. They also want to know if she will go to lunch with them.

"A lunch date would be a definite conflict of interest on my job," admitted Lucy, a contract compliance officer with the Region V Office of Civil Rights and Urban Affairs (CRUA).

She is one of two women EPA representatives who visit construction sites in six Midwest states to see if the required number of minorities are employed on the job.

When a contractor bids on a \$5,000,000-plus federal construction pollution abatement job, he must comply with federal guidelines which require the hiring of a certain percentage of minorities during the life of the contract. The minorities can be black, female, American Indian or of Latin American heritage.

The contractor is responsible for finding and employing the minorities, and must submit monthly compliance reports showing the number of minorities employed, their salaries, and the number of hours they worked during the reporting period. The paperwork isn't popular with the hardhats, but the jobs—worth up to \$105 million in some places—

are important.

"The whole procedure is kind of a pain in the butt to the contractor," says Rodriguez, "but they don't feel that way when the time comes to pick up the payout vouchers."

For Midwestern contractors, the federal government has become one of the biggest and most lucrative employers; EPA is giving Midwestern cities more than \$4.4 billion to build sewage treatment plants from now through September 1977.

Contractors in the Midwest are lining up to bid on federal pollution abatement construction jobs because the pickings are slim in the highway, home and office fields right now. A \$102 million



Contract compliance officer Lucy Rodriguez takes pains to avoid conflict of interest situations.

sewage treatment plant construction grant means hundreds of jobs for carpenters, steel workers, heavy equipment operators, laborers, bricklayers, electricians, and architects and engineers.

Rodriguez is on the site to make sure that perhaps 14 per cent of these jobs go to minorities, the actual percentage of which is determined through either a "hometown" or "imposed" plan.

A hometown plan is a joint undertaking by unions, contractors and the minority community designed to assure that all interested parties share in the authority and responsibility for its administration.

Contractors doing \$10,000-plus work in a hometown plan area fall under the jurisdiction of EPA. Chicago has an imposed plan because unions and contractors could not come up with one that the federal government deemed equal. The Chicago-imposed plan covers not only the city, but several surrounding counties.

Says Roland Cornelius, director of the Region V CRUA

Office, "Many times a contractor will tell us that he can't hire minorities because the unions won't send him any blacks, Spanish, or Indians.

"In those cases we tell the municipality or contractor he can go outside the union to hire minorities," Cornelius added.

He noted that the burden of compliance is on the contractor, explaining that EPA can ask the Justice Department to investigate union hiring practices.

EPA monitors how many minorities are on the job through monthly reports and on-site inspection. If the latter doesn't match the former, CRUA gives the grantee-contractor a month to make adjustments.

"If, after a month, the required report doesn't show any improvement, a hearing is set up within 10 days of the date on the 30-day report," says Cornelius. So what it boils down to is that a contractor has almost 45 days to right any wrongs in the minority employment requirements.

"What's happening," says Leroy King, contract compliance officer, "is that some contractors

are playing a cat-and-mouse game with us. They hire a minority for the first three days of the month and then let him go."

King says he is disturbed to see a contractor doing that. The black or Indian is fired after the report is filed and it isn't until the on-site inspection that the discrepancy shows up. The contractor then takes his 45 days to correct the situation, usually by hiring another minority for three more days.

"Sometimes," says King, "we find contractors who play this game until their contract ends."

Another problem the CRUA staff is investigating involves consulting engineering firms that design the water and sewage treatment plants for large and small communities.

Towns usually turn over big treatment plant jobs to consulting engineers because small city staffs have neither the manpower nor the expertise to handle the jobs.

Consulting engineering firms are full of engineers, architects, land use planners, chemists and managers. What you don't see on their professional staffs are blacks, Indians or women. Or as Charles Lewis, compliance officer, puts it, "When I check with consulting firms, I usually find the only black in the mailroom."

What the firms do, says Cornelius, is hire Indians from India to fulfill their minority recruitments, not knowing the Indians are not considered a minority by the federal government.

"What neither the contractors nor the consulting engineering firms realize," Cornelius added, "is that the federal government can stop the pay outs..."

However, stopping paychecks is the last step the Civil Rights and Urban Affairs compliance officers want to take. As long as the contractor shows good faith, people like Lucy Rodriguez and LeRoy King will make every effort to give the contractor the support he needs.

"We play no favorites," said Cornelius.

New
Public Affairs
Phone Number
Is
(312) 353-2072

Regional Administrator	GEORGE ALEXANDER	353-2000
Deputy Regional Administrator	VALDAS ADAMKUS	353-2000
Legal Problems	ROBERT SCHAEFER	353-2016
For the Media, General Public and Those Hopelessly Lost in the Bureaucracy	FRANK CORRADO, LEE BOTTS	353-2072
Minority Contract Compliance For Government Contractors	ROLAND CORNELIUS	353-2320
Research & Development Grants	CLIFFORD RISLEY	353-2200
Management Division	THOMAS YEATES	353-2024
Looking For Work? (Personnel)	GERALD RAATZ	353-2026
Documerica Photos, Graphics	MANFRED NEUMANN	353-2059
Air & Hazardous Materials Division	ROBERT DUPREY	353-2211
Questions About Solid Waste Disposal	KARL KLEPITSCH	353-2197
Questions About Pesticides Registration, Certification of Applicators	MITCHELL WRICH	353-2192
Questions About Air Pollution Standards	JOHN CHICCA	353-2205
Water Division	HENRY LONGEST	353-2147
Problems With Construction Grants (Overall)	TODD CAYER, EUGENE CHAIKEN	353-2121
In Illinois	ARWIN HOTHAN	353-2140
In Indiana	THOMAS SMITH	353-2135
In Michigan	WILLIAM SANDERS	353-2126
In Minnesota	JACK DAWSON	353-2133
In Ohio	CHARLES POREMBA	353-2144
In Wisconsin	JOHN KELLEY	353-2130
Problems With Water Planning (Overall)	GARY SCHENZEL	353-2154
In Illinois	NOEL KOHL	353-2188
In Indiana	CHARLES ORZEHOSKIE	353-2163
In Michigan	SARA WISE	353-2160
In Ohio	MICHAEL MACMULLEN	353-2172
In Minnesota-Wisconsin	RONALD DECESARE	353-2167
Environmental Impact Statements On Construction Projects	EUGENE WOJCIK	353-2157
Water Quality Standards	CHRIS POTOS	353-2165
Local Water Supply Problems	JOSEPH HARRISON	353-2151
Enforcement Division	JAMES MCDONALD	353-2076
Water, Pesticides Enforcement Problems	DALE BRYSON	353-2076
Air Enforcement Problems	DAVID KEE	353-2081
Wastewater Discharge Permits	AL MANZARDO	353-2102
Surveillance & Analysis Division	CHRIS TIMM	353-2300
How Good is the Air?	GERALD REGAN	353-2303
EPA Comments on Environmental Impact Statements	GARY WILLIAMS	353-2307
Emergency Oil Spills	RUSSELL DIEFENBACH	353-2316
PCBs, Other Toxic And Hazardous Substances	KARL BREMER	353-2311
Great Lakes Surveillance Branch	ROBERT BOWDEN	353-5826
Central Regional Lab (Water, Oil, Sediment Testing)	CURTIS ROSS	353-8370
Field Offices:		
Illinois	LEE TOWNSEND	353-5638
Michigan-Ohio	A. R. WINKLHOFFER	8-293-4876
Indiana	DAVID STOLZENBERG	8-335-6264
Minnesota-Wisconsin	CLARENCE OSTER	8-725-4242
		then 861-4467

Environmental town meetings – the conversation is always lively

They decided it wouldn't be held in a New Hampshire church . . . or a Massachusetts town hall . . . or a farmhouse in Vermont. But the idea was basically the same: give local people a chance to speak out in an open and free manner on local problems.

EPA's main contribution to the Bicentennial this year has been a series of town meetings—"Environmental Town Meetings"—convened throughout the United States to give local residents a chance to talk with top EPA and state pollution control officials on environmental problems.

The next of these town meetings in Region V is scheduled September 13 in Marquette, a bustling city on Michigan's Upper Peninsula.

Between 300 and 500 persons are expected to be on hand at Jamrich Hall at Northern Michigan University to talk with Region V Administrator George Alexander and Howard Tanner, director of the Michigan Department of Natural Resources. The meeting will be broadcast live from 7:30 to 10:30 p.m. over WNMU (Ch. 13) and WNMU-FM (90.1).

Issues have varied from town to town during the series, although over-regulation, jobs, local air and water problems, and pesticides have remained popular topics.

In Marquette, and the Upper Peninsula in general, preservation vs. development, and jobs vs. environmental damage have been the key threads running through such issues as the Navy's "Project Seafarer," a communications system that would cover 3,000-4,000 square miles in a grid-like pattern of buried antenna cable.

Other high-interest items include a proposed site for radioactive waste disposal, and

proposed expansion of mining operations.

Other town meetings in Region V during the past year have been held in Cleveland, Minneapolis, Indianapolis and Springfield, Ill.

In the first Region V town meeting last October in Cleveland, EPA Administrator Russell Train, Ohio EPA Director Ned Williams and then-Region V Administrator Francis Mayo were peppered with questions and comments during a three-and-a-half hour session.

One person, for example, said

the town meetings were nothing more than "a farce" and "a traveling show" because (he alleged) citizens groups were denied the right to participate in state hearings on air pollution with the Republic Steel Corporation.

Train countered, however, telling the audience that, "From my standpoint, this town meeting has been anything but a farce. For me, at least, it has been educational."

EPA Deputy Administrator John Quarles joined Mayo a few



days after the Cleveland meeting for one in Minneapolis. Also on hand to answer questions was Lovell Richie, deputy executive director of the Minnesota Pollution Control Agency.

One citizen asked whether anything was being done by the government to see that smaller, more efficient autos were being produced. Quarles replied that a number of pollution control and gasoline mileage requirements currently under consideration by Congress would very probably move the auto industry toward such types of vehicles.

Someone else asked Quarles whether there were dangers inherent in the construction of nuclear power plants. Quarles told the assembly that if one meant the operation of nuclear power plants as opposed to their construction, then the answer was yes. But he added that there are always risks in such ventures.

"I don't believe we should turn our backs on the use of nuclear power because I think we need it," Quarles told the Minneapolis gathering.

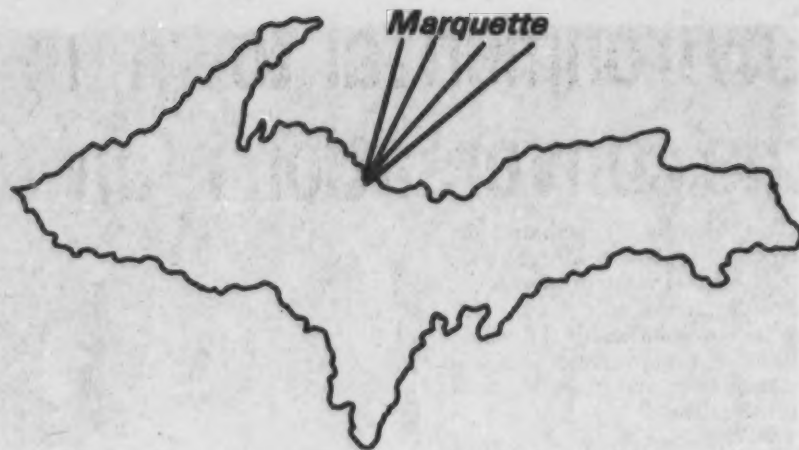
A packed house turned out for the Indianapolis town meeting May 12. On the "firing line" with Alexander and Quarles was Oral Hert, director of the Indiana State Board of Health.

The first question in the Indiana capital was in letter form; the writer wanted to know why the federal government "... is assuming jurisdiction over every creek and rivulet in America."

Alexander said the statement referred to Section 404 of Public Law 92-500, the Federal Water Pollution Control Act of 1972. He noted there had been some news stories that every farm in the nation would eventually be required to have a permit "for everything it did."

The regional administrator told the crowd the stories were absolutely untrue and that Section 404 "is a very modest permit program for things which will have an adverse effect on wetlands."

A member of the Indianapolis Chamber of Commerce then stated a Los Angeles Times article



reported that a former EPA scientist had "systematically distorted research reports in an effort to prove that pollution from sulfur-bearing fuels had an adverse effect on human health."

Quarles replied that did not know whether the allegation was accurate or not, but he pointed out that the agency had appointed three EPA staff members to analyze the standards in question.

EPA has also contracted with an independent panel of experts to conduct a six-month study of the report, Quarles noted.

The last questioner of the evening asked how many small businesses had closed since the creation of EPA and the Occupational Safety and Health Administration.

Quarles responded that there have been relatively few closures of businesses and very few

workers put out of work due to the actions of either of the two agencies. In fact, he said, environmental protection has created many more jobs than it has terminated.

On the whole, EPA feels the town meetings have been successful. They usually climax a long day, filled with meetings among federal and federal EPA officials and the editorial boards of local newspapers; luncheons with environmental groups; informal gatherings with local businessmen, and visits by local officials and state legislators with farmers.

"You can't make decisions in a vacuum," says EPA Deputy Administrator John Quarles. "You've got to get out and talk with people. They have to be part of the decision-making process."

Next stop, Marquette.

**New
Phone Number
Public Affairs
Is
(312) 353-2072**



Recipients of the 1976 Illinois Environmental Quality Awards display their certificates after a recent luncheon in Chicago. The winners and the category in which they were selected are (back row from left) Rep. Robert E. Mann, state elected; William Ehre, citizen activist; Steven Aavang, citizen activist; Island Lake Mayor Gildo deLorenzo, local elected; Matthew Plesinski, citizen activist; Dr. William Beecher, science-technology; Michael Mauzy, state non-elected; Jacob Dumelle, accepting for David P. Currie, state non-elected; and Dr. Theron Randolph, environmental education and science-technology. Middle row from left are John Fanta, youth award; Catherine Kendall, citizen activist; Virginia Stehney, citizen activist; Joe Higgins, environmental education; Edward Campbell, state non-elected; Mary Elisabeth Hay, citizen activist; Alan Larson, local elected; Ronald Bulkema, local non-elected; Harold Kiehm, environmental education; and a representative of the Thom Creek Woods Joint Management and Planning Committee, local non-elected. Front row from left are William Mitchell, citizen activist; Richard Young, news media; Mary Lee Strang, environmental education and citizen activist; and John Cody, news media.

Cleveland air pollution just won't fly away

One thing you have to admit about air pollution—it's democratic. Take Cleveland, for instance. Developers of high-rise condominiums are complaining because they're having trouble selling their units. The reason? Fly ash keeps drifting down on the rooftop tennis courts, soiling the players' pretty, white outfits.

Down at ground level, middle class types must curtail such backyard pleasures as barbecues because the fly ash tends to give the hamburgers a rather gritty taste.

The air in Ohio's largest city is frequently beset by particulates (fly ash in this case) and sulfur dioxide emissions from not one, but two generating companies that provide the city and surrounding environs with electricity, as well as by steelmaking operations and industrial coal-fired boilers.

The publicly-owned utility is known as the Cleveland Municipal Light Plant, "Mun Light" to Clevelanders. Its only generating plant has been operating since 1941 near Lake Erie. Current

figures from the Cleveland Division of Air Pollution Control indicate that the plant spews forth 4,114 tons of particulates and 12,380 tons of sulfur dioxide per year into the Cleveland air.

The privately-owned utility is the Cleveland Electric Illuminating Co. (CEI), which began operations back in the 1920s. It is operating three generating plants in Cleveland—on Canal Road, East 20th Street, and what is known as the Lakeshore plant. CEI also runs plants at Avon Lake, just west of

the city; Eastlake, just to the east of Cleveland; and Ashtabula, farther east along Lake Erie, about 30 miles from Cleveland.

CEI is a much bigger operation than Muny Light and pollutes the air more. It isn't the city's biggest particulates polluter (that dubious distinction falls to Republic Steel, according to APCD Commissioner Howard Bergman), but it contributes plenty.

Says Bergman, "We have a rather convoluted situation here, what with two different companies selling electricity.

"What isn't complicated, though, is the fact that both Muny Light and CEI are in gross violation of particulate and SO₂ emission standards.

Bergman capsulized some of the problems in Cleveland. "Let's look at Muny Light first. An abatement order was issued by the Cleveland APCD way back on Aug. 13, 1971, directing the Utilities Department of Cleveland to halt the illegal emissions from the Muny plant.

"Muny Light cited a lack of capital funds and appealed our order to the Cleveland Board of Building Standards and Building Appeals. The five-member board upheld their original appeal, and did likewise with three subsequent ones.

"The end result," Bergman continued, "is that the original air pollution problem remains five years after the issuance of our original order."

EPA Region V officials have been active in the case of Muny Light, too. Said Peter Kelly, an attorney with the Enforcement Division, "We issued notices of violation against two of Muny Light's boilers and smokestacks last December 10. And this past June, we issued an enforcement order against the boilers, as well as another violation notice, this time against a third boiler that had gone back into operation during the interim.

"The order," Kelly continued, "requires the city to bring one boiler into compliance with particulate pollution regulations

by April 1977 and the other by June 1977.

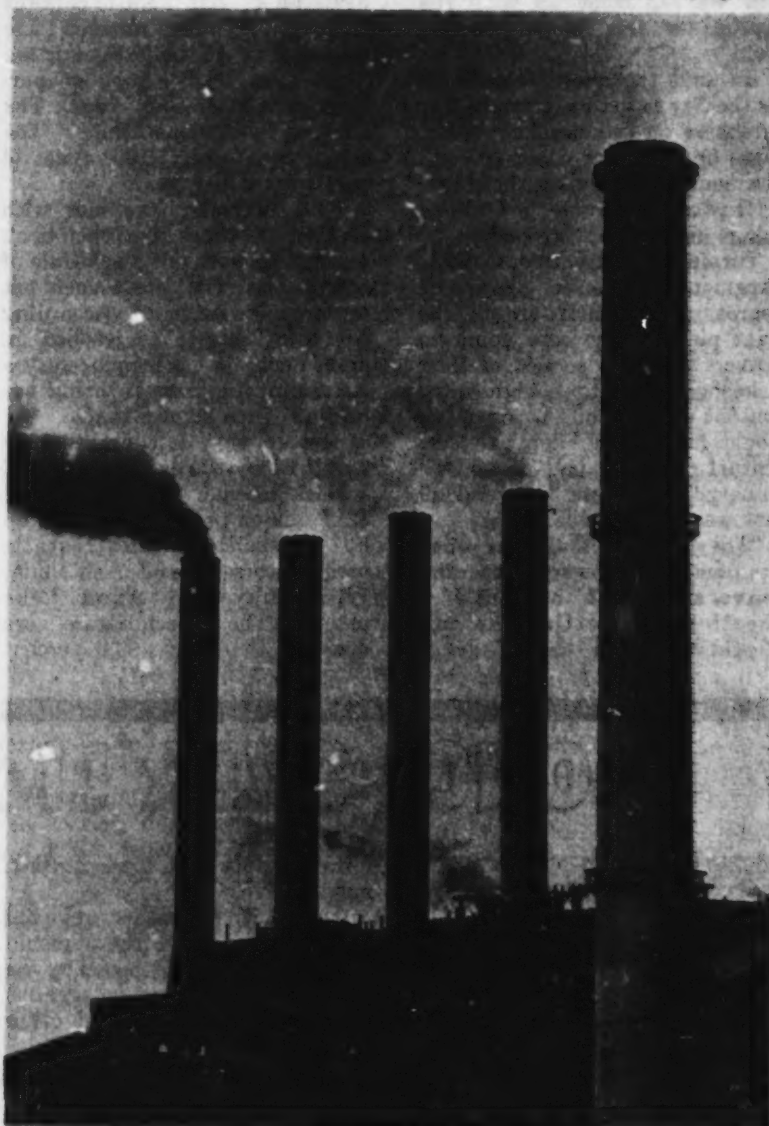
"The crux of the problem is that, while Muny Light has pollution abatement equipment in place, it isn't operating properly. Also, we put them under a Sept. 1, 1976 deadline to order low-ash coal to cut down on particulate emissions."

Besides all that, there's the matter of a \$330 million antitrust suit the City of Cleveland has filed against CEI. In a nutshell,

the city contends that CEI is trying to put Muny Light out of business by monopolizing electric power sales. Muny is buying about 70 per cent of the electricity it sells from CEI. The hassle stems from an apparent disagreement over the price CEI originally agreed to charge Muny Light for the power.

Says Bergman, "Muny is pleading poverty when it comes to pollution abatement equipment. Actually, they aren't kidding on

(Official City of Cleveland Photograph)



The Lake Shore Plant of the Cleveland Electric Illuminating Company contributes a good share of particulate matter.

that score; they are in bad financial shape.

"What it amounts to is that we tell Munny they have to clean up. They say they can't because they can't raise the money to buy electrostatic precipitators, which would go a long way towards solving the problem," Bergman added.

At the time of the federal notice of violation, Raymond Kudukis, Cleveland utilities director, said, "We can't even raise the capital for repairs of the generating equipment. I don't see how we can come up with the capital for this (pollution control.)"

He said the alternatives were for the city to get an exemption or extension on the clean air order, cease operating or come up with new sources of funding the plant.

"I don't see any of those things happening," he said.

Turning his attention to CEI, Bergman said that, "To some degree, their hearts are in the right place. They were going to convert the older section of their Lakeshore plant from high-sulfur content coal to oil, a move we would have been happy to see. Unfortunately, the Arab oil embargo hit in late 1973 and oil just wasn't available.

"They have the tanks and other equipment necessary for the conversion, but now it's a question of getting an oil allocation from the Federal

Energy Administration."

Be that as it may, the fact remains that (according to the Cleveland APCD) CEI's three generating plants in Cleveland are currently dumping 10,295 tons of particulates and 58,697 tons of SO₂ in the air annually.

But those plants aren't the only offenders. In late February of this year, Region V Enforcement Division officials issued a 30-day notice of violation against the CEI plants in Ashtabula, Willoughby and Avon Lake.

Said David Kee, chief of the division's Air Enforcement Branch, "These notices are directed at 16 boilers emitting more than 28,000 tons of particulate matter per year. The allowed emissions under the regulations are 7,100 tons of particulates per year."

EPA officials have met with CEI several times since then in an attempt to work out a schedule of compliance. The latest such get together was August 6. According to Peter Kelly, "We reached an agreement in principle on a continuing program to bring the boilers into compliance. We expect to sign a consent order with CEI by the end of August."

Back in June, CEI announced a \$217 million program to clean up by installing electrostatic precipitators at the Ashtabula, Willoughby and Avon Lake plants. The precipitators are designed to remove 99.5 percent

of the particulates from the plants' stacks.

Jerry Mix, CEI public information specialist, said, "We don't feel as if we're just sitting on our rear, thumbing our noses at EPA and our customers. A figure like \$217 million is hardly what you could call just a drop in the bucket."

He went on to say that, as might be expected, consumers will foot the bill for pollution control. Mix cited CEI's 1975 annual report in which president Karl H. Rudolph called the costs extremely high and the benefits questionable.

In that report, according to Mix, Rudolph noted that, "Without exception, (they) must be factored into the price of electricity to the consumer."

Rudolph added that pollution control, including the projects announced in June, would total \$270 million in five years. CEI also said at the time that the electrostatic precipitators will bring all but its Lakeshore plant into compliance with state particulate emission standards.

Compliance at that facility is (hopefully) to be achieved when the portion burning high-sulfur-content coal switches to oil.

In the meantime, Cleveland remains one of the dirtiest big cities in the country, and EPA and the Cleveland APCD continue their big battle to clean up the pollution sources one by one.

ONCE OVER LIGHTLY



Region tightens controls on grants monitoring

Steps have been taken to tighten controls on the millions of dollars Region V grants each year to support pollution control ef-

forts of state and local governments.

George R. Alexander, regional administrator, said the regional staff has been strengthened by the addition of program grants analysts, accountants and other financial specialists.

He explained that when EPA was formed, the emphasis was on establishing environmental programs at state and local levels. Said Alexander, "Grants were

often administered by engineers and scientists technically qualified in the environmental area, but not skilled in accounting procedures and practices."

To eliminate these problems, he continued, a new office comprised of program grants analysts was organized to assist state and local agencies in monitoring their compliance with federal requirements.

Since EPA was established in

December 1970, the Midwest Region has granted more than \$83 million to state and local governments for air and water pollution control.

Court denies U.S.S. request for permit stay

A U.S. Court of Appeals has denied a motion by the United States Steel Corporation for a stay of effectiveness of a permit requiring substantial water pollution cleanup at its Gary (Ind.) Works facility.

The permit, issued June 25 under the 1972 Amendments to the Federal Water Pollution Control Act, calls for U.S. Steel to cut discharges of ammonia, cyanide and phenols by July 1, 1977, to levels necessary for the improvement and protection of water quality. Primary source of the pollutants at the Gary Works are the blast furnaces and the coke plant.

The facility discharges about 750 million gallons of polluted water each day to the Grand Calumet River and Lake Michigan. Reductions in ammonia will be about 60 per cent, in cyanide about 95 per cent and in phenols about 90 per cent. The permit also requires improvements in the control of suspended solids, and oil and grease.

Veto bill easing noise pollution regulations

Ill. Gov. Dan Walker has vetoed a bill which for the first time would have exempted by law certain industries from environmental protection laws. Senate Bill 193 would have outlawed noise regulations covering some grain elevators, auto dragstrips, and certain sporting events.

He said the Illinois Institute for Environmental Quality will conduct economic impact studies of noise standards for both grain elevators and motor racing events. The IEQ currently is evaluating new regulations for motor racing proposed by U.S. EPA.

EPA grant helps train sewage plant operators

A \$250,000 EPA grant has been awarded to Indiana Vocational Technical College for construction of an environmental training center for wastewater treatment plant operators on the school's Gary campus. Nicknamed the environmental and health training center, the building will cost \$1 million and occupy 25,000 square feet.

During its first two years of operation, the facility is expected to fulfill about 25 to 30 per cent of operator training needs within the state. The center will include a pilot wastewater treatment plant with pumps, pipelines and flow measuring devices; a wastewater analysis lab, an equipment maintenance lab and three classrooms.

EPA offers review of nuclear reactor study

Copies are now available of EPA's review of the Energy Research Development Agency's final Reactor Safety Study, commonly referred to as the Rasmussen study.

(At present, there are 14 nuclear power plants in operation in Region V states, and 21 more are in the planning or construction stage.)

The agency views the study as a major advance in the risk assessment of nuclear power plants, but at the same time criticizes the volume by claiming it failed to address adequately the health effects expected during an accident.

EPA also says the study's assumptions regarding evacuation as a remedial measure were not consistent with current emergency response planning practices, and that the Rasmussen report underestimates the consequences of the release of radioactive materials.

Copies of the EPA comments may be obtained by writing the agency's Office of Radiation Programs (AW-459), 401 M Street, S.W., Washington, D.C. 20460 or by calling (202) 755-4362.



\$298 million granted for tunnel project

Grants of more than \$298 million were released by Region V recently to assist the Metropolitan Sanitary District of Greater Chicago in construction of water quality control elements of the district's Tunnel and Reservoir Program (TARP).

The grants represent 75 per cent of the estimated costs for five major segments of TARP's Mainstream Tunnel System (MTS), which extends from suburban Wilmette on the north to suburban Summit on the south.

The MTS is one of four tunnel systems that are a part of TARP. The others are the Calumet, Lower Des Plaines, and O'Hare systems. Each will be an independent operating unit, with collection, retention and conveyance.

When completed, TARP will be a massive tunnel system under the Chicago metropolitan area for storing sewage and storm water runoff until it can be pumped into sewage treatment plants. It is expected that it will reduce combined sewer outflows during storm periods, eliminate river bank overflows during high water periods, reduce drainage problems, and prevent release of polluted flood waters in Lake Michigan as now happens during storm conditions.

Inland Steel to reduce Lake Michigan pollution

Inland Steel Corporation will substantially reduce its pollution discharges to Lake Michigan as the result of a permit issued recently for Inland's Indiana Harbor Works in East Chicago, Ind.

Issued under provisions of the 1972 Amendments to the Federal Water Pollution Control Act, the permit imposes strict effluent limitations and monitoring requirements on Inland. The firm

must reduce its maximum discharge of ammonia by 80 percent, phenols by 50 percent, and cyanide by 90 per cent.

The three pollutants are key concerns of U.S. EPA from a water quality standpoint in the Indiana Harbor area. Besides restricting discharges of ammonia, cyanide and phenol, the permit tightly controls suspended solids and oil and grease pollution.

During the course of this action, Inland proceeded with installation of the necessary treatment facilities. Consequently, it should achieve compliance with the permit requirements by July 1, 1977, according to Region V enforcement officials.

45 States must alter their clean air plans

The governors of 45 states, including all six in EPA Region V, have been notified by the agency that their state clean air plans must be revised to attain and maintain the national ambient air quality standards (NAAQSs).

EPA has set ambient air quality standards for five pollutants—particulate matter, sulfur dioxide, carbon monoxide, photochemical oxidants and nitrogen dioxide. All Region V states except Ohio must submit new regulations for only one—photochemical oxidants. Ohio must submit revised regs for that pollutant and also for Co.

The state implementation plan (SIP) revisions now being required are subject to two implementation dates. First, if needed, all achievable emission limitations must be submitted as

SIP revisions no later than July 1, 1977.

Secondly, all other measures needed to attain and maintain the NAAQSs must be submitted no later than July 1, 1978. These "other measures" may include such items as land use measures, transportation controls, transit improvements, zoning ordinances, building codes (such as to increase insulation), inspection/maintenance programs (for stationary and/or mobile sources), etc.

According to EPA, the "other measures" are often incorrectly construed to be strictly "maintenance" measures; many are, in fact, effective for attainment also.

For the record, the only states not being required by the agency to submit revisions regulating one pollutant or another are Alaska, Florida, Hawaii, Mississippi and Washington.

News for Government

LOCAL REPORT

Following is a list of communities, jurisdictions, etc., in Region V that Received grants from EPA between June 15 and Aug. 4, 1976. Most were for sewage treatment projects of one kind or another and totalled \$429,797,029.

ILLINOIS

Antioch, 7/21, \$20,139; Belleville, 6/22, \$147,075; Brimfield Sanitary District, 7/30, \$22,950; Bryant, 6/23, \$120; Centralla, 7/20, \$191,175; Danville Sanitary District, 6/21, \$8,550; Deerfield, 6/18, \$336,000; DuPage County Dept. of Public Works, 7/22, \$225,000; Flat Rock, 6/28, \$20,100; Good Hope Sanitary District, 6/28, \$8,550; Governors State University, 6/16, \$54,119; Granite City, 6/22, \$26,500; Joliet, 6/29, \$185,175.

Kingston, 6/24, \$11,175; Kilmundy, 6/29, \$11,100; Macon Sanitary District, 6/22, \$600; Milledgeville, 6/16, \$14,718; Mokena, 7/29, \$15,525; Metropolitan Sanitary District of Chicago, 7/1, \$298,243,275; Mt. Vernon, 6/30, \$1,213,000; Odell, 6/28, \$4,298; Rockford Sanitary District, 7/29, \$1,158,975; Salem, 6/28, \$34,200; Salt Creek Sanitary District, 7/30, \$21,900; St. Augustine, 6/17, \$1,350; Sterling, 6/29, \$90,300; Toluca, 7/27, \$16,181; Trenton, 6/28, \$3,497; Tuscola, 7/14, \$720; West Chicago, 6/24, \$141,900. Illinois total: \$302,228,667.

INDIANA

Ambia, 6/24, \$4,500; Avilla, 6/21, \$30,750; Bainbridge, 6/30, \$13,275; Batesville, 6/28, \$75,075; Boonville, 6/30,

\$86,175; Brookville Lake RWD, 6/30, \$11,400; Brookville, 6/25, \$170,400; Centerville, 6/24, \$30,300; Covington, 6/23, \$196,125; Crawfordsville, 6/16, \$454; Crown Point, 7/21, \$206,850; Eaton, 6/22, \$9,225; Fortville, 7/30, \$87,150.

French Lick, 6/29, \$39,300; Gary Sanitary District, 6/29, \$26,038,050; Greensburg, 6/30, \$745,725; Griffith, 6/30, \$492,300; Haubstadt, 6/30, \$16,875; Hillsboro, 6/28, \$10,725; Jasonville, 6/30, \$22,725; Kawanna, 6/16, \$11,175; Lafayette, 6/30, \$45,675; Logansport, 6/24, \$15,300; Loogootee, 6/30, \$21,825; Lynnville, 6/24, \$4,800; Marengo, 6/29, \$12,000.

Markle, 6/30, \$14,100; Mellot, 7/29, \$6,975; Monroeville, 6/22, \$8,700; Morristown, 6/30, \$16,125; New Albany, 6/29, \$35,292; New Pekin, 6/30, \$6,300; North Salem, 6/28, \$19,725; Oakland City, 6/15, \$32,825; Oaktown, 6/24, \$11,100; Orleans, 6/30, \$23,850; Otterbein, 6/28, \$391,200; Paoli, 6/29, \$31,950; Redkey, 6/28, \$69,825; Shelbyville, 6/17, \$25,875.

South Dearborn Sanitary District, 7/14, \$44,775; Speedway, 6/30, \$54,975; Summitville, 7/20, \$22,500; Switz City, 6/18, \$11,250; Tifton Conservancy District,

6 / 28, \$5,250; Walton, 6 / 30, \$19,350; Washington, 6 / 30, \$50,925; Washington Township Rural Sanitary District, 6 / 29, \$8,625; West Terre Haute, 6 / 30, \$86,775; Winamac, 6 / 29, \$39,150. Indiana total: \$29,434,973.

MICHIGAN

Alpena County Dept. of Public Works, 6 / 24, \$4,875; Bad Axe, 6 / 29, \$1,500; Bergland, 6 / 24, \$2,250; Bessemer, 7 / 30, \$21,975; Big Rapids, 7 / 25, \$335,425; Calhoun County Bureau of Public Works, 6 / 30, \$30,925; Cass County Bureau of Public Works, 6 / 30, \$61,350; Clara, 6 / 28, \$46,050; Coopersville, 7 / 30, \$12,600; Detroit, 6 / 21, \$1,308,150.

Dexter, 7 / 23, \$132,030; Durand, 7 / 30, \$89,746; Genesee County, 7 / 29, \$7,200; Golden, 7 / 29, \$41,475; Grand Rapids, 7 / 20, \$54,048; Hazel Park, 6 / 30, \$19,650; Ionia County Bureau of Public Works, 7 / 22, \$260,750; Jackson County Bureau of Public Works, 6 / 21, \$137,175; Kent County Dept. of Public Works, 6 / 30, \$5,215,350; L'Anse, 7 / 23, \$36,600.

Leelanau, 8 / 3, \$6,540; Lenawee County Drainage Commission, 6 / 30, \$166,275; Monroe County-Bedford Township, 6 / 30, \$9,968,850; Monroe County, 6 / 30, \$2,450,025; New Haven, Norway, 6 / 28, \$10,563; Oakland County Dept. of Public Works, 7 / 22, \$90,450; Ontonagon, 7 / 26, \$341,025; Oscoda County Dept. of Public Works, 6 / 25, \$13,875; Ovid, 6 / 29, \$12,375.

Plainfield, 6 / 22, \$8,700; Plainwell, 6 / 16, \$37,675; Republic, 7 / 29, \$8,850; Rudyard, 7 / 20, \$3,750; Saginaw County Dept. of Public Works, 7 / 13, \$5,700; Salem, 6 / 15, \$6,675; South Haven, 6 / 17, \$26,100; St. Clair County Dept. of Public Works, 7 / 29, \$76,425; Superior, 7 / 29, \$2,475; Vassar, 7 / 14, \$33,750; Vicksburg, 6 / 21, \$14,850; Washtenaw County Dept. of Public Works, \$1,908,714. Michigan total \$23,043,616.

MINNESOTA

Crow Wing County, 6 / 15, \$42,675; Glenville, 6 / 30, \$6,317; Grand Meadows, 7 / 8, \$28,800; Metro Waste Control Commission, 6 / 15, \$452,850; Minnesota Pollution Control Agency, 7 / 26, \$388,659; Rogers, 7 / 9, \$7,638.

Silver Bay, 7 / 26, \$1,002; Spring Valley, 7 / 22, \$11,425; Taunton, 7 / 13, \$105,400; Twin Cities Metro Waste Control

Commission, \$37,178,840; West Concord, 7 / 22, \$23,250; Western Lake Superior Sanitary District, 6 / 30, \$488,775; Worthington, 7 / 20, \$30,575. Minnesota total: \$38,736,686.

OHIO

Akron, 8 / 4, \$2,248,225; Baillic, 7 / 9, \$20,325; Barberton, 6 / 28, \$324,700; Canton, 6 / 28, \$3,375; Clermont County Board of Commissioners, 6 / 25, \$31; Cleveland Regional Sanitary District, 7 / 13, \$8,410,850; Columbiana, 6 / 30, \$176,550; Conneaut, 7 / 21, \$68,400; Dayton, 6 / 30, \$545,400; Eldorado, 6 / 28, \$3,075; Fairfield, 7 / 9, \$244,350.

Geauga County Board of Commissioners, 6 / 21, \$514,650; Johnstown, 8 / 3, \$20,325; Kalida, 6 / 21, \$263; Lake County Health Dist., 7 / 2, \$37,705; Lima, 7 / 21, \$585,225; Lorain, 6 / 28, \$7,500; Lucas County Board of Commissioners, 6 / 28, \$209,700; Marysville, 7 / 23, \$33,825; Milford Center, 6 / 17, \$11,175; Napoleon, 6 / 25, \$88,125.

Ohio Dept. of Agriculture, 7 / 19, \$7,862; Orrville, 6 / 28, \$79,575; Stark County Board of Commissioners, 7 / 20, \$3,375; Trumbull County, 7 / 26, \$323,925; Williamsport, 7 / 23, \$583; Wilmington, 6 / 29, \$53,825; Woodsfield, 7 / 27, \$20,775; Youngstown, 7 / 15, \$6,750. Ohio total: \$14,070,044.

WISCONSIN

Anigo, 6 / 29, \$187,450; Appleton, 7 / 15, \$14,974,450; Chilton, 6 / 18, \$73,950; Cuba City, 7 / 27, \$9,750; Heart of the Valley, 7 / 14, \$30,000; Heart of the Valley Metropolitan Sanitary Dist., 6 / 29, \$5,477,250; Howards Grove, 6 / 29, \$10,200; Kewaunee, 7 / 6, \$47,175; Lakeland Sanitary Dist., 7 / 30, \$3,450; Marshall, 7 / 30, \$17,100; Mukwonago, 6 / 28, \$27,300.

Niagara, 7 / 1, \$133,045; Northern Moraine Utility Commission, 7 / 23, \$214,200; Norway Sanitary Dist. No. 1, 7 / 16, \$3,225; Oakland Sanitary Dist. No. 1, 6 / 17, \$24,000; Oconto Falls, 6 / 30, \$329,775; Plain, 6 / 16, \$9,000; Racine, 7 / 26, \$1,993; Random Lake, 6 / 29, \$43,125; Ridgeland, 6 / 28, \$21,525; Saukville, 6 / 29, \$36,525; Sheboygan, 7 / 19, \$2,925.

St. Nazianz, 7 / 29, \$19,725; Sturgeon Bay, 6 / 18, \$179,850; Verona, 6 / 28, \$53,025; Viroqua, 6 / 21, \$18,000; Watertown, 6 / 30, \$293,550; Wisconsin Dept. of Natural Resources, 7 / 23, \$21,080. Wisconsin total: \$22,263,043.

FEDERAL REGISTER

JUNE 28

Proposed Rules

Ocean dumping criteria

Notices

Pesticide registration:

Terpene polychlorinated

JUNE 29

Rules

Bidders, ineligible; cancellation of regulation

Proposed Rules

Air quality implementation plans; various States, etc:

District of Columbia

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Captafol

Toxic pollutants; effluent standards; correction

Notices

Meetings:

State-Federal Water Programs Advisory Committee

Pesticide/new animal drugs, transfer of authority to Food and Drug Administration; cross reference

Pesticide chemicals in or on raw agricultural commodities; tolerances, exemptions, etc.:

Glyphosate

Pesticide registration:

Applications

Indiana and Puerto Rico, interim certification

Pesticides, experimental use permit:

Forest Service, methyl 2-benzimidazole-carbamate hydrochloride on elm trees

Pesticides, mercurial; order granting motion for reconsideration in case of Chapman Chemical Co. et al

JUNE 30

Rules

Air quality implementation plans, various States, etc.:

Maryland

Proposed Rules

Water pollution; effluent guidelines for certain point source categories:

Benzidine

Notices

Report of the State-Federal FIFRA Implementation Advisory Com-

mittee; solicitation of comments

JULY 1

Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Terbacil; correction

Notices

Food additive petitions:

E. I. duPont de Nemours and Co

Pesticide registration:

Applications (6 documents)

Pesticides, specific exemption and experimental use permits:

Agriculture Department: insecticide on citrus

Ansil Co.; monosodium acid methanearsonate on wheat

Arkansas University: fungus spores on rice and soybeans

Ciba-Geigy Corp.; herbicides on corn

Guam Department of Public Health and Social Services; sodium monofluoroacetate; to control feral and stray dogs

Gulf Oils Chemical Co.; miticide malonoben on citrus, apples and

pears Gulf Oil Chemical Co.; herbicides on industrial and nonagricultural sites Sandoz, Inc.; insecticides on field corn JULY 2 Rules Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: 2,4-D 2-methyl-4-chlorophenoxyacetic acid Dimethyl tetrachloroterephthalate Inert ingredients in pesticide formulations, certain Tricyclohexyltin hydroxide Notices Pesticide registration: Applications (3 documents) JULY 6 Rules Water pollution: effluent guidelines for certain point source categories: Pulp, paper and paperboard; interim rules; corrections Proposed Rules Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Carbaryl Water pollution: effluent guidelines for certain point source categories: Pulp, paper and paperboard; corrections Notices Pesticide and food additive petitions: Chevron Chemical Co. et al Dow Chemical Co. et al Pesticide chemicals in or on raw agricultural commodities: Acephate Pesticide registration: Applications JULY 7 Rules Air quality implementation plan: New Jersey Notices Air quality implementation plans: Idaho and Oregon JULY 8 Rules Air pollution, standards of performance for new stationary sources: California: authority delegation's (2 documents) Grants, State and local assistance: Treatment works, construction, procurement subagreements Water pollution: effluent guidelines for certain point source category: Gum and wood chemicals; extension of comment period Proposed Rules Water pollution: effluent guidelines for certain point source categories: Gum and wood chemicals; extension of comment period Notices Air pollution: standards of performance for new stationary sources: California: authority delegation Air quality implementation plans, various States, etc.: Colorado Montana North Dakota South Dakota	Utah Wyoming Background report: recommendations on guidance for technic to reduce unnecessary exposure from x-ray studies in Federal health care facilities; availability Meetings: Science Advisory Board, Ecology Advisory Committee Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Hexadecyl cyclopropanecarboxylate Pesticide enforcement policy statement: Preventive pest control treatments in the absence of target pests Pesticides, mercurial; order granting motion for reconsideration in case of Chapman Chemical Co., et al JULY 9 Rules Water pollution: effluent guidelines for certain point source categories: Radionuclides Notices Fuels and fuel additives; gasoline additives, suspension of enforcement, and regulation JULY 12 Rules Air quality implementation plans: New Jersey Virgin Islands National Pollutant Discharge Elimination System: Program to agricultural activities; application Notices Air quality implementation plans: various States, etc.: Alabama, et al Arizona (2 documents) California (6 documents) Delaware District of Columbia Hawaii Maryland Nevada (3 documents) New York Virginia West Virginia food additive, petitions: Zoecon Corp.; withdrawal Pesticide applicator certification; State plans: Montana Pesticide registration: Applications (4 documents) Pesticides, specific exemptions and experimental use permits: Agriculture Department FMC Corp Monsanto Co Oregon JULY 13 Rules Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Mobay Chemical Corp., Chemagro Agricultural Div Proposed Rules Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Mobay Chemical Corp., Chemagro	Agricultural Div Notices Air quality implementation plans, various States, etc.: Commonwealth of Puerto Rico New Jersey Pennsylvania Meetings: Leptophos Advisory Committee Pesticide applicator certification; State plans: Hawaii Michigan Pesticide registration: Applications (2 documents) Pesticides, specific exemptions and experimental use permits: U.S. Department of Agriculture and U.S. Fish and Wildlife Service University of Idaho JULY 14 Rules Water pollution: effluent guidelines for certain point source categories: Photographic processing Proposed Rules Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: O,S-Dimethyl phosphoramidothioate Water pollution control: Organic chemical contaminants; control options Notices Meeting: Toxic Substances Programs, Ad Hoc Study Group on Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: Acephate Pesticide programs: Presumption against registration and continued registration of pesticide products containing chlorobenzilate; extension of comment period (2 documents) Pesticides, specific exemptions and experimental use permits: University of Arizona; correction Water pollution prevention and control: List of categories of sources; addition JULY 15 Rules Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.: O,O-diethyl O-(methylsufinyl) phenyl phosphorothioate Proposed Rules Water pollution: toxic pollutants; standards; correction Water pollution: toxic pollutants; standards; availability of reports Notices Pesticide applicator certification; State plans: Virginia Pesticide chemicals, etc.; petitions: E. I. Du Pont De Nemours Co JULY 16 Rules Air pollution control, new motor vehicles and engines: Certification and test procedures; technical amendments Proposed Rules
---	--	---

Water pollution; effluent guidelines for certain point source categories: Fertilizer; urea and ammonium nitrate	and engines: California, waivers; hearing	Air quality implementation plans; various states:
Notices	Water pollution, discharge to navigable waters:	Maryland
Air quality implementation plans; various states, etc.:	Territory of Virgin Islands, approval of program	New Jersey
Arkansas	JULY 26	Architect-Engineer services; policies and procedures
Iowa	Rules	Grants:
Kansas	Organization and functions, republication	State and local assistance; correction
Louisiana	Wastewater; secondary treatment information	Notices
Missouri	Water pollution, effluent guidelines for certain point source categories:	Ambient air monitoring reference and equivalent methods:
Nebraska	Carbon black manufacturing, information availability and extension of time	Ozone analyzer
New Mexico (2 documents)	Hospitals, information availability and extension of time	Pesticide chemicals, etc., petitions:
Oklahoma	Proposed Rules	Ansul Co
Texas	Water pollution; effluent guidelines for certain point source categories:	Pesticides, specific exemptions and experimental use permits:
Meeting:	Carbon black manufacturing; extension of comment period	American Cyanamid Co. et al
National Air Pollution Control Techniques Advisory Committee	Hospitals; extension of comment period	California Department of Food and Agriculture
Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:	Notices	AUGUST 2
Cyano (3-phenoxyphenyl) methyl 4-chloro- α -(1-methylethyl) benzeneacetate	Committee membership; request for nominations:	Rules
JULY 19	Ecology Advisory Board	Water pollution; effluent guidelines for certain point source categories:
Rules	Municipal wastewater disinfection; secondary treatment	Iron and steel manufacturing; correction
Pesticide chemicals in or on raw agricultural commodities, tolerances and exemptions, etc.:	Pesticide applicator certification; State plans:	Proposed Rules
S-(2-(ethylsulfinyl) ethyl) O,O-dimethyl phosphorothioate; correction	Texas	Air quality implementation plans, various States, etc.:
Notices	Pesticide registration:	Oregon
Pesticide applicator certification; State plans:	Applications (2 documents)	Water pollution, effluent guidelines for certain point source categories:
Iowa	Pesticides, specific exemptions and experimental use permits:	Iron and steel manufacturing; correction
JULY 20	American Cyanamid Co. and Gulf Oil Chemical Co	Notices
Rules	Colorado	Air quality implementation plans, various States, etc.:
Air quality implementation plans; various states:	Fisons Corp	Illinois
New York	Interior Department	Indiana
Treatment works; construction; grants, correction	J. J. Mauget Co., Inc., et al	Michigan
Proposed Rules	Texas Department of Health Resources	Minnesota
Grants:	Thompson-Hayward Chemical Co. and Mobay Chemical Co	Ohio
State and local assistance; cooperation guidance	3M Co	Wisconsin
Notices	Vermont Department of Agriculture	Meetings:
Air quality implementation plans; various states, etc.:	JULY 27	State-Federal FIFRA Implementation Advisory Committee Working Group on Certification
Maryland	Rules	AUGUST 3
Pesticides, specific exemptions and experimental use permits:	Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:	Rules
New Jersey Department of Environmental Protection; Guthion to control carrot weevil	N-octyl bicycloheptenedicarboximide	Pesticides chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:
Texas State Department of Agriculture; Sodium Chlorate to desiccate flax	Tricyclohexyltin hydroxide; correction	n-Octyl bicycloheptenedicarboximide; correction
JULY 21	Notices	Notices
Proposed Rules	Pesticide programs; Endrin; rebuttable presumption Pesticide registration:	Pesticide programs:
Standards of performance for new stationary sources; proposed amendments to reference methods; extension of comment period	DDT 50 percent Wettable Powder	Scientific Advisory Panel membership nominations
JULY 22	Endrin	AUGUST 4
(No Listings)	JULY 28	Rules
JULY 23	Rules	Water pollution; effluent guidelines and standards, certain point source categories:
Proposed Rules	Air pollutants, hazardous; National emission standards:	Plastic and Synthetics; revocation and suspension of regulations
Water pollution; effluent guidelines for certain point source categories:	Selective enforcement auditing procedures	Proposed Rules
Polychlorinated biphenyls	Notices	Water pollution; effluent guidelines and standards, certain point source categories:
Notices	Environmental statements:	Plastic and synthetics; withdrawal of notice of proposed rules
Air pollution control, new motor vehicles	Availability	Notices
	JULY 29	Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:
	Rules	N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine
	Air quality implementation plans; various states, etc.:	Pesticide registration:
	Maryland	
	Proposed Rules	

Applications
Norton Herbicide
Pesticides, specific exemptions and experimental use permits:
California Department of Health; use of DDT to suppress flea vectors of plague

S. B. Penick & Co

AUGUST 5

Rules

Air quality implementation plans; various States, etc.:

South Dakota

Notices

Food additive petitions:

FMC Corp. et al

Meetings:

Drinking Water, National Advisory Council

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine

Pesticide enforcement program; grant availability

Pesticide programs:

Registration of bacteriostatic water treatment units for home use; interim requirements

Pesticide registration:

Application

AUGUST 6

Rules

Air quality implementation plans:

Oklahoma

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Sodium Chlorate

Notices

Air quality implementation plans:

Ambient air quality standards; monitoring reference and equivalent methods; amendment to equivalent method for SO₂

AUGUST 9

Rules

Air pollution, standards of performance for new stationary sources:

California on behalf of Madera county; delegation of authority (2 documents)

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

S-[2-(Ethylsulfinyl)ethyl] 0,0-dimethyl phosphorothioate

Water pollution control:

Cooling water intake structures; statement availability

Notices

Air pollutants, hazardous; National emission standards and air pollution; standards of performance for new stationary sources:

California, authority delegation

Pesticide applicator certification; State plans

Indiana

Pesticide programs; State registration to meet special local needs; interim certification, various States:

Alabama

South Dakota and Ohio

Meetings:

Air Monitoring Reference Methods; Traceability of Calibration Standards Workshop

Science Advisory Board Executive Committee

Technical Advisory Group to the Municipal Construction Division

Pesticide applicator certification; State plans:

Virginia

Pesticide chemicals, etc.; petitions: Chevron Chemical Co. et al

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Glyphosate

Methazole

Pesticides, specific exemptions and experimental use permits:

Ciba-Geigy Corp.; O-(5-chloro-1-[methylethyl]-1-H-1,2,4-triazol-3-yl) O,O-diethyl phosphorothioate

Delaware Department of Agriculture; control of carrot weevil

Elanco Products Co. and Pennwalt Corp.; soybeans

Quality Criteria for Water; availability of report

*U.S. Government Printing Office: 1976 - 650-516 P.O.: NO. 11 / Regional V-1.

ENVIRONMENT MIDWEST
ENVIRONMENTAL PROTECTION AGENCY

Office of Public Affairs
230 South Dearborn
Chicago, Illinois 60604

THIRD CLASS

POSTAGE AND FEES PAID
ENVIRONMENTAL PROTECTION AGENCY

EPA-335



Return this sheet if you do NOT wish to receive this material, or if a change of address is needed. (Indicate change, including zip code.)



Environment Midwest

REGION V
UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY

SEPTEMBER — OCTOBER 1976

Special Issue:

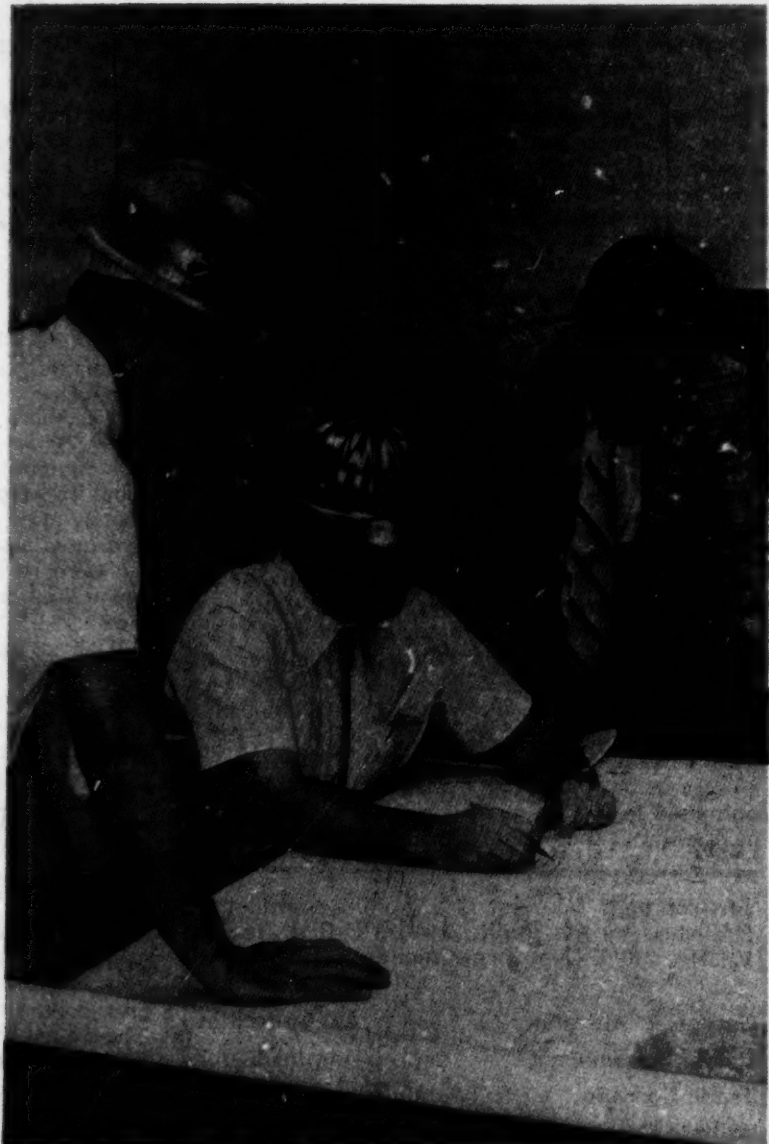
PLANNING



Public Participation
Page 2

Interceptors and Sprawl
Page 5

**Fun Around the
Treatment Plant**
Page 10



Planning and the public

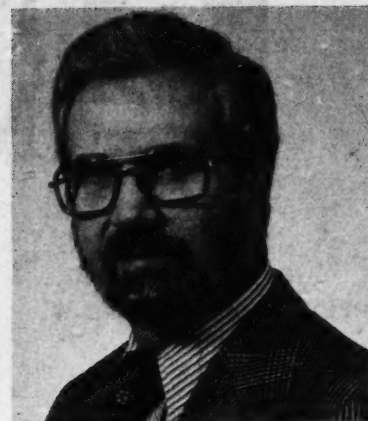
When the new water pollution control act was passed by Congress in 1972, a "public participation" component was spelled out—not as a concession to the democratic process, but as a practical measure.

The best laid plans of engineers and planning theorists often have ended up gathering dust in municipal libraries because they are unacceptable to the community they are designed to benefit. Practicality as well as the letter of the law is the reason the Environmental Protection Agency is stressing the urgency of public participation in development of areawide water quality management plans under Section 208 of PL 92-500.

The goal of the planning is to decide how the waters can be made "fishable and swimmable" by 1983 as the law says they should, and how they can be kept clean and unpolluted through the years ahead. The intent is that citizens and technicians together diagnose the water problems and decide where to compromise in the interests of developing workable plans for clean up.

It sounds easy and is certainly sensible, but planning with public involvement is hard for both citizens and technical experts. Who is the public, and how can planners know what the public wants? Does everyone really want fishable and swimmable water in all the rivers and lakes in the Midwest if paying for it means less money for roads because more money must be spent for sewage treatment? Do local elected officials accurately reflect the temper of the community? Will rampant citizen apathy be the death of the crusade to rescue the environment that caused Congress to set a national policy aimed at stopping all water pollution by 1985?

These are only some of the questions that must be confronted in the 208 planning process, but EPA, the states and the planning agencies are all deter-



GEORGE R. ALEXANDER JR.

mined that all the publics that ought to be involved in the decisions, will be.

EPA, as the funding agency, is not only telling the planning agency that public participation is required but is offering help in doing it. One source of help is a handbook on public participation for water quality management published by our headquarters office in Washington. Another kind of help is assistance from the Midwest regional office in Chicago in preparing information materials that explain what water quality management planning is about. To reach more publics, both the headquarters and regional offices of EPA are contracting with outside agencies and organizations to educate their own members about the process so that they will get involved. Shortly radio and television announcements as well as printed materials will be available to help spread the word to as many citizens as possible in this region that keeping the waters clean depends on them.

With a public that is becoming increasingly suspicious of agency-imposed regulations at any level, in a society faced with—but sometimes unwilling to face—dwindling clean water resources, 208 planning is an all out crusade to invite people into the decision-making process. *The Washington Post*, reporting a recent Congressional decision to save the New River, commented editorially "... in the end, what saved the river was that a lot of people and groups who seldom agree on anything came together on this issue."

The 208 water quality management program provides the technical tools to save the waterways—even fishable and swimmable—and it has built-in provisions for the people to be heard. We can no longer point to industry and say "it's all *their* fault." It's everyone's responsibility and, in the end, what will save the rivers and the lakes is that a lot of people and groups who seldom agree on anything will come together on issues that affect the water where we live and work. Can we count on you?

Environment Midwest is a monthly newsletter published by the Public Affairs Office, Region V EPA, 230 S. Dearborn, Chicago, Ill. 60604.

George R. Alexander, Jr. Administrator
Valdas Adamkus Deputy Administrator
Frank Corrado Public Affairs Director
William Omohundro Editor

ENVIRONMENTAL HOTLINE

(Beginning with this issue, "Environment Midwest" inaugurates a letters to the editor column. We welcome your comments (both pro and con) about stories and articles appearing on these pages. Letters should be typed or printed, and must include the sender's name, title (if appropriate) and address. We reserve the right to edit submissions to conform to limitations of space and standards of good taste. Letters should be addressed to: Environment Midwest, Office of Public Affairs, U.S. Environmental Protection Agency, 230 S. Dearborn, Chicago, Ill. 60604.)

Sir: What are my feelings about a question and answer page? (See June EM). Such a page can be very informative and helpful. I am sure, for instance, you will find nation-wide concern about drinking water. I look forward to participating in such a Q&A session.

Martha C. Johnson
Michigan Pure Water Council
Lansing, Mich.

Sir: I feel that to waste your editorial page for questions and answers would be close to criminal. Such content belongs in your magazine, but in a format similar to "Once Over Lightly" towards the back.

I believe your readers want to know what you are thinking about, your reaction to situations you have faced recently, what are the priorities for the months ahead, what is the rationale for an EPA decision. In short, where do you stand?

And while I have your ear, I received my June EM in mid-June, but the "Federal Register" is only up to May 3. This feature offers an opportunity to learn where comments are offered, but given a 30- or 60-day comment period, the info is too little too late. Why not feature (by asterisk?) current FR entries that invite comment?

Carlos Fetterolf
Executive Secretary
Great Lakes Fishery Comm.
Ann Arbor, Mich.

(The FR listings are presented exactly as they appear in the publication's table of contents. Given the lag time in mailing from Washington, D.C. to our library, to our office, to the printer, to the reader, plus the fact the column was never intended to be a "current awareness" tool, there just isn't enough time to make it feasible to denote such listings, especially where only a 30-day comment period is allowed. — ED.)

Sir: An "environmental hot line" in your magazine is an excellent idea. One of its most valuable functions could be

to inform readers of how they can become involved in the environmental decision-making process. Perhaps you could try it on a six-month trial basis and see what kind of questions you get.

Wayne A. Schmidt
Staff Ecologist
Mich. United Conservation Clubs
Lansing, Mich.

Sir: I read with concern George Alexander's column in the May issue that we have a way to go in cleaning up the environment, and am afraid the job is even bigger than he described it. A story in a recent issue of "Engineering News Record" says that progress in cleaning up the Great Lakes has been delayed to some extent or another. Would future issues cover this subject?

Scott Bailey, P.E.
Midland, Mich.

(A feature story on how the Great Lakes cleanup is progressing will be highlighted in a future issue. — ED.)

Sir: I am disturbed about the misinformation contained in the Indiana segment of your story, "Old Swimmin' Hole Forecast Great" in the May issue. Your source, Mr. Scott (Jim Scott, Porter County Health Dept. sanitarian), apparently has never left Valparaiso to look at the Lake Michigan shoreline. It is not true that there is public swimming only at the Indiana Dunes State Park. The Indiana Dunes National Lakeshore has public swimming beaches at Beverly Shores (four miles of it, no less) and at West Beach, its major recreational area.

Moreover, a recently released report by the U.S. Geological Survey of water quality within the Lakeshore indicated disturbing bacteriological problems in wells tested through the Lakeshore area.

Norma Schaeffer
Public Relations Chairman
Save the Dunes Council
Beverly Shores, Ind.

Sir: George Alexander hit the nail squarely on the head at least twice in his opening remarks in the June issue. Once was when he said that communication is the name of the game—especially where environmental issues are concerned. The second time was with the suggestion for a question and answer page.

Certainly you will receive some "crank" letters . . . and I think Frank Corrado's staff should have the right not to print crank questions which perhaps would harm environmental communication and/or the environmental movement itself.

Decisions in this area are very important and before beginning the program the person or committee that screens the question must accept the

responsibility to use care in differentiating between the crank letter and one which may simply have an opposing viewpoint. I have faith in Corrado's staff to cope with this challenge.

If you do begin a question and answer section, I wish you the best of success with it!

Carl J. Liebert
Regional Manager
Public Affairs
St. Regis Paper Co.
Rhineland, Wis.

Sir: I'm all for a question and answer page, but I have a complaint—why is it so hard to find out anything about the nearest recycling center? Why did I have to call the Museum of Natural History to get information about this subject?

I spent two hours on the phone trying to get some group to accept empty glass jars and water glasses, but no one would take them. Many agencies in and around Cleveland have the word "Environment" or "Environmental" as part of their business title, but they seem to know little about where any recycling centers are.

The whole setup is a waste of time and money; we are back to putting all the junk into the rubbish and onto the dump.

I know your question and answer page will be a success.

Harriet E. Russell
Cleveland

Sir: On page 7 of the June issue, in the pesticides section, it states that, "In the area of pesticide cancellation, EPA has in the last year removed from the market four pesticides known to cause cancer in laboratory animals—aldrin, dieldrin, heptachlor and chlordane."

Since Herbert L. Perlman, the EPA administrative law judge, dismissed the suspension action against these products because there was no scientific evidence to support an imminent hazard, nor was there sufficient evidence that they produced cancer in laboratory animals, it is highly prejudicial for you to make that statement about heptachlor and chlordane.

We are aware of Administrator Russell Train's actions in overruling Judge Perlman, but even he did not dispute the judge's finding of facts. Cancellation hearings have begun on these products, another reason we consider your published remarks prejudicial. Please refrain from further disparagement of these products pending the conclusion of the appeal and the cancellation proceedings.

Sander Allen
Director, Public Relations
Velsicol Chemical Corp.
Chicago

Late and Breaking News

An important referendum on whether or not to ban **returnable bottles** will be before Michigan voters in the November 2 election. A special task force in Milwaukee has recommended a **\$669 million dollar project** to clean up that city's municipal dischargers into the Milwaukee River and Lake Michigan. . . . An optimistic report by the **Council on Environmental Quality**, . . . but noting that water cleanup is still lagging and that it will cost \$259 billion for air and water cleanup in the next decade. . . .

The U.S. EPA opened its new **noise enforcement** testing facility in Sandusky on October 14; air compressions and medium-duty trucks will be the first products to undergo testing . . . EPA will soon begin pulling autos off Detroit assembly lines to check the reliability of clean air equipment. The "**selective audits**" as they're called will be used when problems are suspected with certain auto models. . . . On October 12 it was announced that the President has signed new **Toxic Substances Control** legislation that will give EPA new control over the thousands of new chemicals being introduced annually into the environment. The measure also bans PCB use within two years. . . . EPA has changed its **lead-in-gasoline** phase down period because of concern for it would create shortages in the summers of 1977 and 1978. Instead the reductions will have to go into effect all at one time, in 1979. The Wisconsin Power and Light Co. is seeking to install a \$29 million **sulfur oxide scrubber** at its Columbua II generating station in ALMA. It's been reported that there will be 10 super cargo carriers on the Great Lakes by 1980. At present there are only 3 . . . Minnesota Governor Wendall Anderson has proposed that **Reserve Mining** be given up to \$70 million in tax credits to aid in constructing an on-land disposal system for its taconite operations on Lake Superior; the proposal would include 25 cent a ton tax on the operations of other taconite firms in Minnesota . . . the Midland-Ross Corp. of Toledo is testing a process for destruction of

Kepone by incineration. If successful, a full-scale plant will be set up to destroy the chemical near Hopewell, Virginia. . . . The Michigan Water Resources Commission is considering a recommendation to adopt a statewide ban on **laundry detergents** containing phosphorus in order to reduce Great Lakes pollution. . . . Over 75% of Wisconsin residents answering a State survey said they were opposed to raising local **property taxes** to pay for pollution control programs. . . . Kentucky Governor Julian Carroll has called for interstate cooperation in planning for power plant growth on the Ohio River; U.S. EPA is financing a technology assessment study of **power plant growth** in the basin.

Coming Next Month...

- ★ ★ ★ **Reye's Syndrome:
Higher Incidence of
Childhood Disease in
Great Lakes Area?**
- ★ ★ ★ **General Motors Builds
Small**
- ★ ★ ★ **New Toxic
Substances Act**

plus

**Briefs, Environmental
Hotline, and more . . .**

Interceptors and Suburban Sprawl

By WILLIAM OMOHUNDRO

Many of the cures for the ills that plague modern man have questionable, if not downright harmful, side effects, and one of the important cures for water pollution—interceptor sewers—is no exception.

It seems that some communities are using federal funds to build more and bigger interceptors than present pollution problems would warrant in anticipation of future development.

In fact, some communities have made plans for sewer construction that will solve that aspect of their growth problems for the next 50 years.

The question is, should EPA be subsidizing the construction of sewer systems in thousands of acres of empty fields and contributing to massive suburban sprawl with its accompanying pollution problems?

CEQ Sponsors Study

In the summer of 1974, Urban Systems Research and Engineering, Inc., under a contract with the President's Council on Environmental Quality, conducted a study to explore the relationships between EPA-financed interceptor sewer construction and residential development patterns in rapidly growing communities.

The primary purpose of the study was to describe and analyze

residential land use impacts of EPA-sponsored interceptor projects, focusing attention on the extent to which the project design, review and approval process included a consideration of these land use implications.

The study concluded that, although the absence of federally financed interceptors is unlikely to prevent low-density housing construction, the availability of sewers is an incentive to development, and the routing, sizing and timing of new interceptors can be a valuable tool for guiding residential land use as part of a comprehensive master plan.

"If the federal government wishes to encourage careful land use planning and control at a local level," the study said, "it can begin by evaluating the extent to which the current design review and approval process for federally financed interceptors takes into account the land use implications of new sewer construction."

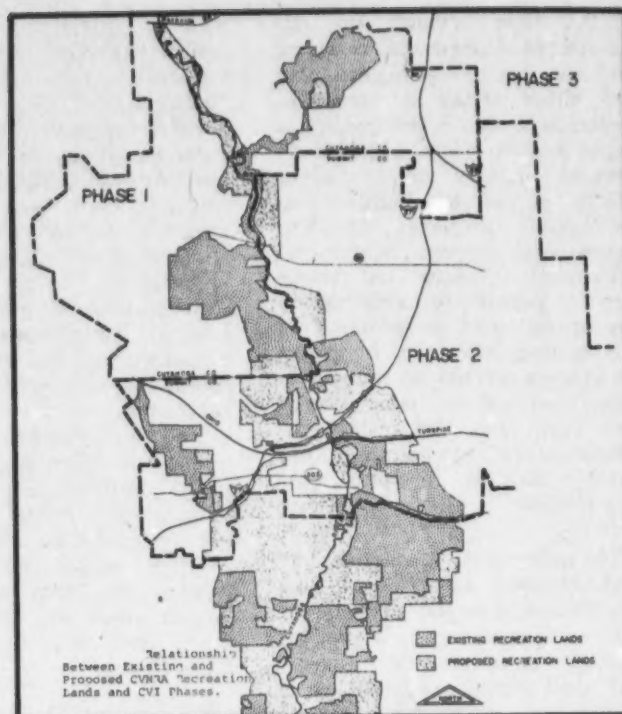
The study made six recommendations. They are: (1) do not provide federal funds for excess

capacity; (2) re-evaluate interceptor staging of project design in rapidly growing areas; (3) use realistic standards for per capita flow; (4) improve population forecasting techniques and review procedures; (5) require a consideration of environmental effects of interceptor-induced land use; and (6) increase public participation in the planning process by publicizing community costs and benefits of interceptor-induced growth.

EPA Develops Policy Statement

In an effort to solve the problem, or at least to mitigate its effects, EPA has developed a policy statement which provides guidance to Agency officials on secondary environmental effects of construction of publicly owned sewage treatment projects.

When a community makes plans for building treatment works, it must evaluate the environmental impacts of the construction and subsequent operation of the treatment works and prepare an environmental assessment.



EPA then reviews the environmental assessment along with the rest of the facility plan and either issues a "negative declaration" or, if the project is expected to have significant adverse primary or secondary effects or to be highly controversial, prepares an Environmental Impact Statement.

Primary effects are those directly related to construction and operation of the project.

Secondary effects of a project are indirect or induced changes in population and economic growth and land use and other environmental effects resulting from these changes in land use, population, and economic growth.

The policy of the Agency is that environmental assessments and environmental impact statements shall analyze secondary as well as primary environmental effects, and shall indicate whether such effects may contravene federal, state and local environmental laws and regulations, and plans and standards required by environmental laws or regulations.

Where careful analysis leads to the conclusion that the secondary effects of a project can reasonably be anticipated to contravene an environmental law or regulation, or a plan or standard required by an environmental law or regulation, EPA is required to withhold second and third step grants until the applicant revises the plan, takes steps to mitigate the adverse effects, or agrees to conditions in the grant document requiring actions to minimize the effects.

Actions which might be taken to mitigate secondary effects include: (1) phasing and orderly extension of sewer service; (2) project changes; (3) improved land-use planning; (4) better coordination of planning among communities affected by the project; (5) sewer use restrictions; (6) modification or adoption of environmental programs or plans such as Air Quality Maintenance Plans; and (7) improved land management controls to protect

water quality, such as sedimentations and erosion control and flood plain management.

EPA policy requires the regional offices to follow up a grant to make sure that the applicant continues to make progress on mitigative actions and to meet any special conditions imposed.

Several options are open to the Regional Administrator if there is a failure on the part of the community to abide by the agreement.

He can withhold payment, refuse to process subsequent grant applications from the municipality, refuse to approve grants for future phases of the projects, enter an injunction against the recipient, suspend project work, or terminate the grant and recover unexpended EPA funds.

EPA Gives CVI Close Scrutiny

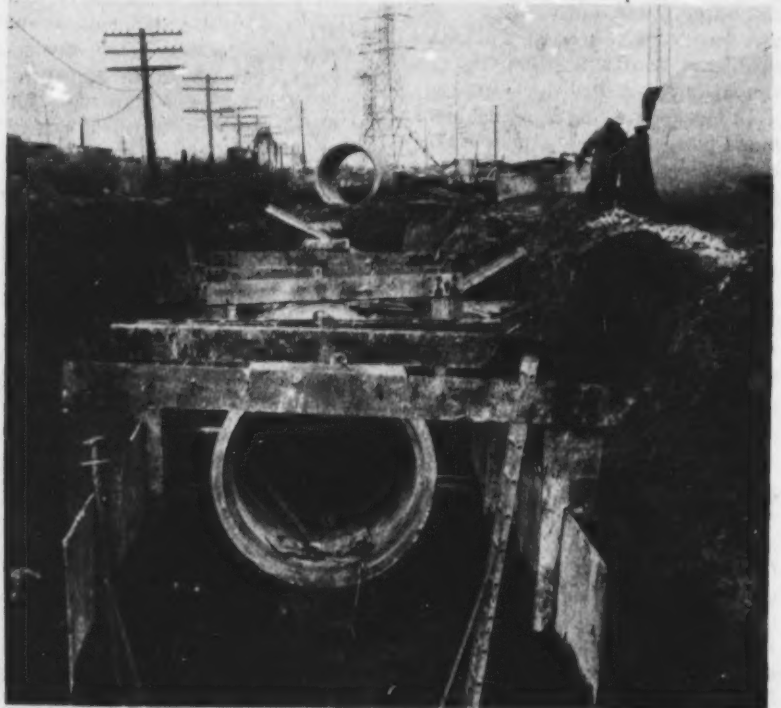
One project which has recently come under close EPA scrutiny for secondary effects is the

Cuyahoga Valley Interceptor of the Cleveland Regional Sewer District (CRSD).

The final Environmental Impact Statement done for the project recently went to the Council on Environmental Quality.

EPA concluded that the project was needed. The final EIS said removal of septic tank effluent from an area almost totally unsuited for filter fields would be a valuable improvement as would be the removal of poorly treated industrial discharges from a stream still heavily loaded with pollutants and transfer of all these to a plant with a consistently high level of treatment.

The Agency said that to bring about these improvements two important criteria must be met. First, unnecessary harmful impacts must be avoided in the project construction. Second, planning steps must be instituted to insure the cost effectiveness and environmental soundness of alternatives for future sewerage facility improvements in the



Planning sewer construction with environmental impact in mind.

second and third phases of the Cuyahoga Valley Interceptor study area.

The final EIS said that the CRSD has taken a number of reasonable precautions to limit harmful primary projects impacts. Additional design revisions were made and mitigating measures taken to improve the cost effectiveness and environmental soundness of the first phase.

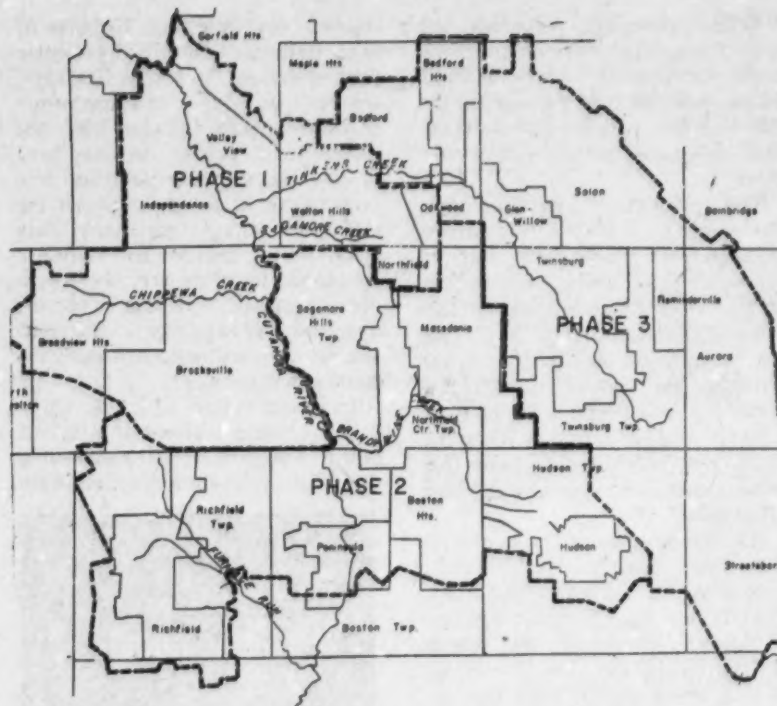
Among these was a reduction in the size of the interceptor sewers. The main interceptor was reduced from 108 inches to 90 inches diameter below Tinker Creek and from 78 inches to 66 inches inside diameter between the Brecksville sewage treatment plant and Tinkers Creek. The CRSD had recommended a reduction of the inside diameter of the main interceptor from 108 inches to 96 inches.

Two CEQ Case Studies

The CEQ sponsored study by the Urban Systems Research and Engineering Study examined eight local projects with particularly high excess capacity and the largest proportion of vacant developable land in the service area to assess in detail.

One project examined in Oakwood Beach, New York, is, according to the study, "clearly designed to encourage these development trends." The study said an expressed purpose of the project is to replace the inadequate septic tank disposal systems now utilized to support new construction with a comprehensive sewage collection and treatment system which will permit more rapid, as well as higher density, residential housing development. The development is viewed as a positive phenomenon.

The case study focused on two large interceptors included in the first phase of the Oakwood Beach project—two interceptors which will cost over \$40 million to construct. Though many agencies were involved in project planning and the design of the interceptors



CVI study area showing construction purposes

has been repeatedly revised over the five-year planning period, the study staff found no evidence that any serious land use impact analysis had been performed.

Some attention was given to the validity of projected population, but there appeared to be little concern over the possible negative secondary effects of stimulating rapid residential housing construction, the study said.

Another similar case is Horn Lake Creek Basin of Mississippi/Tennessee. The basin is a 62.5 square mile area located directly south of Memphis, Tennessee, and encompassing the northeastern portion of DeSoto County, Mississippi, and smaller portions of Shelby County, Tennessee.

As the Memphis Metropolitan Area has experienced rapid population increases over the past 10 years, the Horn Lake Creek Basin has become a prime location for moderate income housing development as a result of its proximity to Memphis and the availability of large tracts of relatively inexpensive land.

The EPA sponsored interceptor is a joint Mississippi/Tennessee effort designed to prevent continued pollution of Horn Lake Creek, which flows northwest through the basin and into Memphis.

Planning for this project has been complicated by the need to coordinate the efforts of a variety of agencies—local sewer districts, municipal, county, and regional planning organization, as well as municipal, county and state government sponsors.

However, the study said, the land use impacts of the project have not been considered an important aspect of this planning.

"Everyone involved," it says, "appears to agree to the continued development of this area into moderate income residential neighborhoods, and there has been no assessment of potential secondary effects of the project which might well strain the very limited resources of the rural county where rapid development is anticipated."

While planning agencies all over the country work on plans to make the waters of the United States safe for fish and people by 1983, some people are worried that the water could become too clean.

The planning agencies are developing water quality management plans with federal funds provided under Section 208 of the 1972 amendments to the water pollution control act. The law says that the plans must provide for enough pollution control to reach the 1983 goal of fishable and swimmable water in rivers and lakes and to keep the water clean for at least the next 20 years after that.

Another section of the law says that there must be public participation in all such planning. That is how the planning agency in Neenah, Wisconsin, has found out that water could be too clean to suit some people who live on the shores of Lake Winnebago. The economic health of Neenah and other towns in the Fox River Valley below Green Bay is tied to the paper industry. Many residents have been accustomed to go to the North Woods to vacation. Get the river clean enough for fishing and swimming and some Fox Valley residents say they will be plagued at home with summer cabins owned by people from Milwaukee and Chicago up and down Lake Winnebago.

Fears that water improvement costs to the paper companies could mean fewer jobs and a real or imagined threat of an unwanted influx of summer residents is enough to create resistance to the best intentioned water quality management plans of the Fox Valley Regional Planning Commission.

But many people do want the water to be clean enough for swimming and are willing to pay whatever it takes to keep it that way. Another Wisconsin community recently voted itself an expensive sewer system when it became apparent that the town was losing its main industry,

tourism and camping, because of lake pollution caused by septic tank overflow. In towns like this, water quality management planning could be the way the community decides not only how to clean up existing pollution but how to avoid future expense for still more sewage treatment. This town may decide to regulate development more strictly where more septic systems would overload the capacity of the land and allow overflow to contaminate nearby waterways.

In Neenah, and wherever there is disagreement about the extent of water pollution or ways to solve the problems, public participation

"Some people
are worried
that the water
could become
too clean..."

during the planning process is intended to resolve the differences under Section 208. The goal is to produce a water quality management plan which has community approval and political support by the time it is completed. In bureaucratic language, to be approvable by the federal government, a 208 plan must be "implementable."

As one planner put it, the purpose of this kind of planning is to make things happen: to get community agreement on what kind of pollution needs to be controlled and how much to expect for the next 20 years,

where sewage treatment plants need to be located, how the community will pay its share of construction costs and for plant operation, and whether pollution should be controlled by other ways such as preventing erosion or controlling fertilizer from fields or city dirt from streets.

Because the emphasis on consulting with the public before the technical planning is finished is so unusual for the regional agencies who have grants for water quality management planning, EPA is making special efforts to help the planning agencies meet the requirements for public participation. From Washington, EPA has contracted with a wide range of organizations such as the League of Women Voters and the National League of Cities to educate groups they work with about 208. The Midwest regional office of EPA in Chicago is providing expert assistance to the agencies in developing public information materials and techniques in getting citizens involved.

In the six Midwestern states of Region V, a total of 34 planning agencies have been designated by the governors to prepare 208 plans for their areas. The states themselves, through the environmental protection agencies or departments of natural resources, will do the water quality management planning for all the areas not covered by the regional planning agencies.

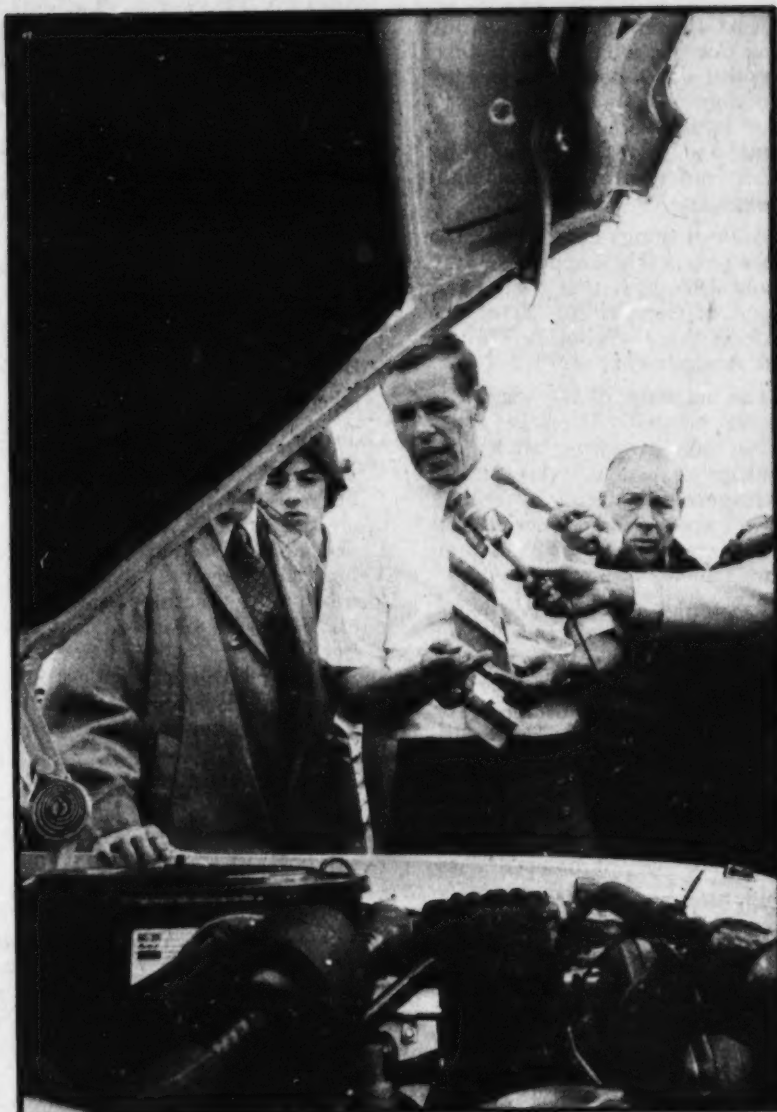
Each agency and the states receive 100 percent federal grants through EPA. The federally supported program will last for two years. The Region V grants range from \$42,500 to the Eastern Upper Peninsula Regional Planning and Development Commission in Michigan to \$7,300,000 to the Northeastern Illinois Planning Commission which serves six counties and seven million persons in the Chicago metropolitan area.

Each agency is expected to spend about 10 percent of its grant for public participation. The

agency is required to provide information materials to the public and access to all technical documents or reports. Besides holding public meetings open to everyone, the agencies are expected to identify interest groups that might have a special interest in knowing what is being considered for water quality improvement. The agency must not only interpret and explain what solutions are being considered for local water pollution problems. It must also have procedures for considering ideas that citizens or special interests present to the planners.

In addition to informal activities to educate the general public and respond to special interests, every agency must have a special citizen advisory committee as well as technical advisory committees. The identifiable "publics" who belong to the advisory committees can range from representatives of industry to elected local officials, to farmers, to conservationists to just about anyone who cares enough clean water to want to decide how to clean it up now and keep it clean for the future.

The job of professional planners used to be satisfied by counting noses, estimating future populations and projecting the number of new highways or houses or sewage treatment plants that would be needed for future years. The new emphasis on consultation with the public before final plans are completed is intended to make certain that the plans are used. Public participation in 208 planning is essential to satisfy both the letter of the law and the desire of the Environmental Protection Agencies to achieve implementable areawide water quality management plans. ■



Two-time Indy winner, Bobby Unser promoted clean air through tuned engines at free auto clinics in six Midwestern cities last month. Unser will continue to do public service spots for EPA Region V and radio announcements through the winter.

Next time you and the family head out to the park and it's too crowded don't despair. Someday you may be able to trek over to your local wastewater treatment plant and use the surrounding open space and recreational equipment.

A lot of things have to fall into place before that happens on any grand scale, but that's the basic intent of Section 201 (f) of the Federal Water Pollution Control Act Amendments of 1972.

The language of the section is simple enough. It states that "The administrator shall encourage waste treatment management which combines 'open space' and recreational considerations with such management."

To be sure, there are problems. That's one reason the Water Cleanup and Land Conference was convened in Boston last November. EPA Administrator Russell Train was there, as were representatives of water and river associations and state officials from throughout the New England area.

One of the problems they

discussed was the fact that implementation of 201(f) could delay completion of waste facilities because the legal entity responsible for construction of wastewater treatment facilities might pursue mixed, if not opposed objectives.

For example, obtaining an easement for an interceptor sewer may pose minimal problems since it would convey right of maintenance and repair and not incorporate public recreational use of going through private property. Otherwise, land purchase or condemnation could be required.

The point is that 201(f) is not applicable in all circumstances. Says Ralph V. Nordstrom, Region V land use planner, "The whole idea behind the section is that the public has made an investment in water quality improvement. Inasmuch as they've made this investment, they should be entitled to the use of the clean water that results."

Nordstrom added that the intent of 201(f) isn't that every new or existing wastewater treatment plant eventually have

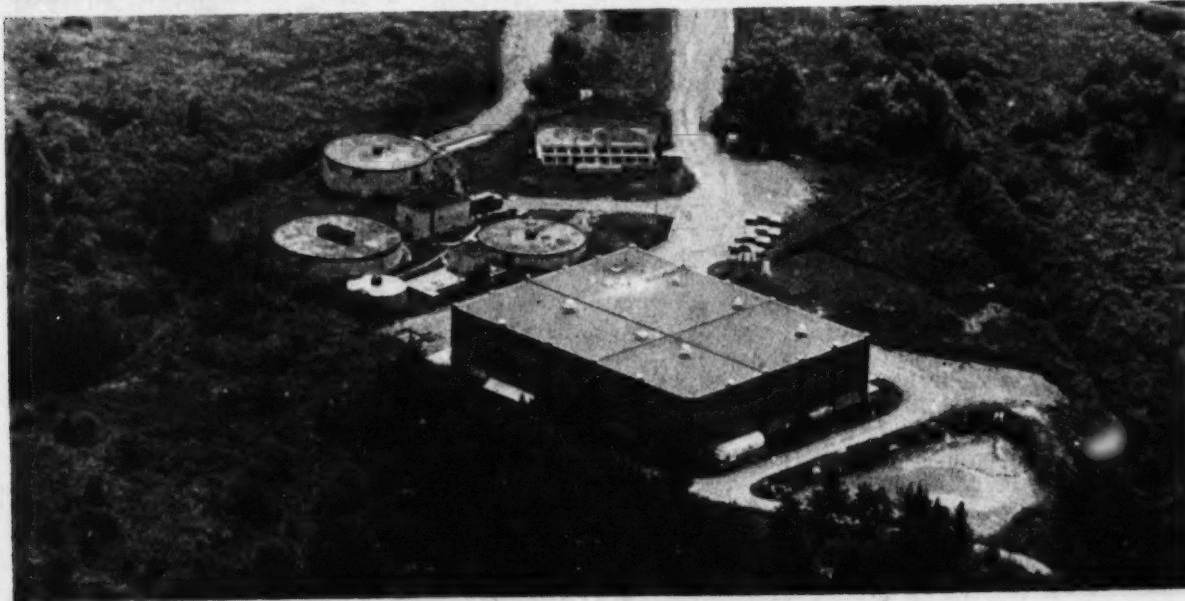
(some sort of recreational high-rise" built right on top of it.

He notes that, "201(f) isn't the universal solution. Maybe you can work something out in one municipality for the open space and recreational facilities. But because things all fall into place in one town doesn't mean another city 30 miles down the road will be able to accomplish the same things."

The ultimate intent of the section, says Nordstrom, is to make sure that the possibilities for recreational facilities are at least considered *early* in the planning stage of a wastewater treatment plant.

"That's the time to try and sort things out to see what kind of potential there is for open space and recreation, *not* after you're knee-deep in blueprints."

One thing that remains to be hashed out is the actual implementation of 201 (f) since there are a number of courses of action. Based on federal-state working relationships, the most conventional approach would be to pass the responsibility to state pollution control agencies, assuming they were agreeable.



Fun around the treatment plant



"Another problem," says Nordstrom, "is that EPA has no money for 201(f) projects; financing them isn't our function. However, as far as the public interests are concerned, they conceivably could be satisfied through land and water conservation funds available from the Bureau of Outdoor Recreation.

"The funds would come to communities through various state agencies such as the departments of natural resources," Nordstrom added.

He noted that still another consideration is land evaluation.

"Let's say that a certain body of water is presently so polluted it's just about worthless from a recreational standpoint.

Boaters shun it because it stinks. There may be little or no fishing activity. Assuming the pollution situation improves five or ten years down the road and the

recreational demand increases, shorelines that formerly had no value would escalate dramatically. What you have to do is short-circuit the 'greed factor' before it runs rampant," Nordstrom said.

One big goal of the entire 201(f) program is to make citizens aware that their participation is sought in helping plan and develop recreational usages around treatment plants or even for plants that have been closed.

"We're feeling our way through the problems," Nordstrom said. "This is one of the reasons we're planning to host a workshop early this winter in Chicago, the idea being to develop local interest and make people aware of the 201(f) program and the possibilities it has.

"Hopefully, the workshop will take up where the one in Boston last year left off. We want to

develop strategies for implementation and make materials available to assist park groups, sanitary districts and similar organizations that are interested," Nordstrom noted.

He added that the conference in Boston revealed some good examples of local 201(f) projects, one involving the cleanup of the Merrimac River in Massachusetts and Connecticut.

"The folks in that area have been involved for about 10 years, though, so they're a little more sophisticated about 201(f). They've organized watershed associations, for example, to help bring their projects to fruition.

"In one area, local folks have beautified some old river locks that had become an eyesore. Now the entire area is crisscrossed with bike trails and has become a very popular recreation area," Nordstrom added.



Water workshop in February

The International Joint Commission's Research Advisory Board will hold a three-day invitational workshop in Windsor, Ontario concerning legal and economic mechanisms for pollution abatement Feb. 21-23, 1977.

One important objective of the affair is to develop and recommend new water pollution abatement policies and programs for application in the U.S.-Canadian Great Lakes Basin. For more information write Pat Bonner, IJC-Great Lakes Office, 100 Ouellette Ave., Windsor, Ontario N9A 6T3.

Michigan resumes enforcement

Michigan conservation officers and other lawpersonnel have been notified to resume enforcement of the state's watercraft pollution law, according to the Dept. of Natural Resources.

Enforcement will include inspection of the watercraft and issuance of a certification sticker for approved equipment or a citation for violation.

According to William G. Turney, chief of the DNR's Bureau of Environmental Protection, it is unlawful to discharge sewage overboard from any vessel plying the Great Lakes and Michigan inland waters. It is equally unlawful, he added, to have sanitary facilities on board watercraft which would allow such overboard discharge, whether treated or not.

BRIEFS

"The only sewage disposal facilities that may be legally installed on recreational watercraft are holding tanks," said Turney. He noted that recreational watercraft of other states and countries will be subject to these requirements any time they are in Michigan waters, and liable to the same citations and penalties.

\$9 thousand award to water project

The Region V Great Lakes Surveillance Branch has awarded \$9,666 to the Urban & Environmental Studies Institute of Grand Valley State Colleges for a year-long project of water sampling and water quality testing of Michigan's Grand River.

According to Phillop Nunn, UESI assistant director, tests are made for chemical "ph" balance of water, stream depth, water temperature and more. The samples will be collected seven days a week for the next year.

To supplement the water quality work being done by GVSC, Region V will send its own field teams to the colleges several times during the year to perform on-site tests. The project is part of the agency's continuing effort to clean up Lake Michigan, which receives the waters of the Grand River.

Radioactivity limits

Final regulations have been issued by EPA to limit radioactivity in the nation's drinking water supplies. They will apply to an estimated 40,000 community water supply systems across the country and will take effect June 24, 1977.

The regs set maximum levels for both natural and man-made radioactive contaminants to protect public health, and also specify analytical techniques and monitoring requirements to be used by water supply systems to see if the maximum level limits are being met.

Maximum level for naturally-occurring radioactivity—specifically radium-226—is five picocuries per liter of water. Maximum dosage of manmade radiation allowed by the new regs is 4 millirems per year. Manmade radiation has a variety of sources, including fallout from nuclear weapons tests, medical and industrial uses, and effluents from nuclear power plants.

New Documents

EPA has announced the availability of several documents relating to its proposed Toxic Pollutant Effluent Standards under the authority of the Federal Water Pollution Control Act. All the documents are available from the National Technical Information Service, 5825 Port Royal Road, Springfield, Va. 22151. Here are the documents, listed with EPA report number, title and cost:

EPA-440/9-76-007 (Wastewater Treatment Technology-Aldrin/Dieldrin Manufacturing) \$4; EPA-440/9-76-009 (Wastewater Treatment Technology-DDT Manufacturing), \$5; EPA-440/9-76-011 (Wastewater Treatment Technology-Endrin Manufacturing), \$5.50; EPA-440/9-76-013 (Wastewater Treatment Technology-Toxaphene Manufacturing), \$6; EPA-440/9-76-015 (Wastewater Treatment Technology-Pesticide Formulating), \$6.

EPA-440/9-76-008 (Criteria Document-Aldrin/Dieldrin), \$5; EPA-440/9-76-010 (Criteria Document-DDT), \$6; EPA-440/9-76-012 (Criteria Document-Endrin), \$6; EPA-440/9-76-014 (Criteria Document-Toxaphene), \$4.50; EPA-440/9-76-016 (Economic Impact Assessment), \$4.50.



Breath of fresh air in Michigan

Michigan residents are breathing air that is cleaner and probably fresher than that inhaled a year or two ago, according to the Dept. of Natural Resources.

Dennis Armbruster of the DNR's Air Quality Division says that monitors in 37 of Michigan's 83 counties show that all but four—Alpena, Monroe, St. Clair and Wayne—are in compliance with health standards for particulates set by the federal government.

Monitoring in 26 counties shows compliance with sulfur dioxide standards in all but five—Bay, Ingham, Midland, Muskegon and St. Clair—where specific sources are the major cause of violations, Armbruster added. He said that all counties monitored were judged in compliance with nitrogen dioxide standards.

But for the second year in a row, violations of carbon monoxide standards were noted in three counties—Wayne, Oakland and Saginaw, primarily because of heavy auto traffic. During 1975, more than 2 million pieces of data were gathered from about 400 federal, state and local air pollution monitoring sensors in the state.

Chicago Meeting on Oxidants

More than 200 persons attended a meeting on air pollution in The Chicago Metropolitan Area on October 14. In an effort to deal with the current air pollution problem,

the meeting was co-sponsored by the EPA, The Chicago Department of Environmental Control, the Illinois Institute for Environmental Quality and the Chicago Lung Association.

A summary of the air pollution problem was documented by ozone and carbon monoxide data as monitored by the pollution control agencies. Medical experts also spoke about the health effects of these pollutants.

Levels monitored over a wide portion of the Midwest during recent years indicate the problem is a regional one, although there have been significant improvements in some areas such as sulfur dioxide and suspended particulate. However, as these pollution levels are lowered, others such as carbon monoxide and photochemical oxidants (ozone) need dramatic strategies to bring about their reduction.

Recently Chicago experienced an advisory which lasted ten days. Lake County suffered a yellow alert during August, recording the highest oxidant levels measured in Illinois to date.

The meeting is one step toward the development and successful implementation of solutions in the near future.



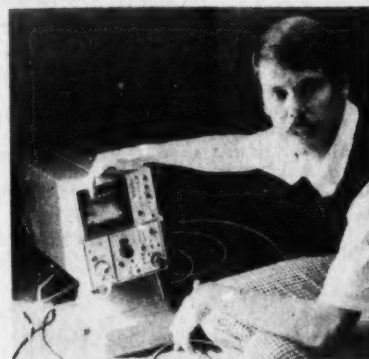
Radiation van tests waves in Midwest

A specially built radiation monitoring van developed and manned by scientists of the EPA was in Chicago from October 10-23 to check the intensity of broadcast radiation from UHF and VHF television and FM radio transmitters.

EPA officials in Chicago said that the project is part of the first phase of a two year analysis of environmental levels of radio and microwave radiation in urban areas of the United States.

EPA, in cooperation with the President's office of Telecommunications Policy, began the study to determine how much electromagnetic radiation there is in different parts of the country and to find out what health effects, if any, the radiation has on humans.

The mobile unit will measure the radiation and process the data in conjunction with health effects research information. The combined data will be used to determine whether environmental criteria are required to control these nonionizing radiation sources.



PCB study in Michigan released

Recently the Michigan Department of Public Health released the results of a two-year United States Federal Drug Administration sponsored study of PCBs in humans. The study represents an attempt to evaluate human exposure to PCBs from consumption of sport-caught Lake Michigan Fish.

The researchers concluded that consumption of Lake Michigan Fish contributed substantially to the PCB levels in the blood of humans. The data also justify continued recommendations that intake of Lake Michigan salmon and lake trout be limited to less than one meal per week, or 24 pounds a year.

FEDERAL REGISTER

AUGUST 16

Rules

Air pollution control:

Aircraft and aircraft engines; supersonic aircraft

National emission standards for hazardous air pollutants; authority delegation to Virgin Islands

Air programs; standards of performance for new stationary source; authority delegation to Virgin Islands

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

S-(2-(ethylsulfinyl) ethyl) 0,0-dimethyl phosphorothioate

Notices

Air pollutants, hazardous; National emission standards: U.S. Virgin Islands; authority delegation

Air pollutants, hazardous; National emission standards: U.S. Virgin Islands; authority delegation

Pesticide registration: Applications (2 documents)

AUGUST 17

Rules

Air quality implementation plans, various states: New Mexico

Proposed Rules

Air quality implementation plans; various States, etc.: California

Notices

Air quality implementation plans; various States, etc.: California

Pesticide applicator certification; State plans: Delaware Nevada

AUGUST 18

Notices

Waste, solid; treatment, management, etc.: Effective hazardous waste management, position statement

AUGUST 19

Notices

Air quality implementation plans; various States, etc.: New Jersey

Pesticide applicator certification; State plans: Virgin Islands

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Paraquat

Pesticide registration: Applications (2 documents)

Pesticides; specific exemptions and experimental use permits: Clemson University; DDT on tobacco

AUGUST 20

Rules

Air pollution; standards of performance for new stationary sources:

Emission monitoring requirements; revision

Air quality implementation plans: Georgia

Notices

Food additive petitions:

Monsanto Agricultural Products Co. (2 documents)

Pesticide applicator certification; State plans: New Mexico

Pesticide chemicals, etc.; petitions: Nalco Chemical Co.

Pesticides; specific exemptions and experimental use permits: Corps of Engineers; 2,4-D on alligatorweed

Water pollution control; effluent standards for toxic pollutants; availability of reports

AUGUST 23

Rules

Air pollution control, new motor vehicles and engines:

Light duty vehicles and trucks; evaporative emission test procedures

AUGUST 24

Rules

Air quality implementation plans:

Preparation, adoption, and submittal; approval, etc: correction

Air quality implementation plans; various States, etc.: Indiana

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc:

Captafol

Proposed Rules

Air quality implementation plans; various States, etc.: Oregon

Notices

Pesticide registration: Applications (3 documents)

Pesticides; specific exemptions and experimental use permits:

BASF Wyandotte Corp.; herbicide bentazon on peanuts

Dow Chemical Co.; microbicide bromine chloride to control growth of algae, bacteria and fungi

Mobil Chemical Co.; insecticide on apples, etc.

Shell Chemical Co.; insecticides to control flies and mosquitoes

U.S. Department of Agriculture: microbial insecticide on rangeland grass and hay

AUGUST 26

Notices

Environmental statements; availability of agency comments

Meetings:

Administrator's Pesticide Policy Advisory Committee

Pesticide chemicals, etc; petitions: Chapman Chemical Co., et al

AUGUST 27

Rules

Air quality implementation plans; various States, etc.:

Ohio

Notices

Air pollution; ambient air monitoring reference and equivalent methods

Environmental statements; availability, etc.:

Greeley Region Wastewater Management Program

Metro Denver Sludge Management Plan, Colo

Pesticide applicator certification; State plans:

District of Columbia

Pesticides; specific exemptions and experimental use permits:

American Cyanamid Co. et al.; herbicide, bird repellent and fungicide

California Department of Health; DDT for flea control on wild rodents; amendment

Chevron Chemical Co.; acephate on grapes

Elanco Products Co. et al.; herbicides and insecticides

Health, Education and Welfare Department; DDT on fleas

Idaho State Department of Agriculture;

ethyl parathion to control pea aphid, bean weeds

Monsanto Co. and American Cyanamid Co., herbicides on and

vetch aphid on lentils

North Dakota State University et al.; insecticide and fungicide

Penick, S.B. and Co., et al.; insecticides

Pennwalt Corp. et al.; herbicides and insecticides

Velsicol Chemical Corp. et al.; herbicides and insecticide

AUGUST 30

Proposed Rules

Air pollution; standards of performance for new stationary sources:

Petroleum refinery fluid catalytic cracking units

Notices

Air pollution; ambient air monitoring reference and equivalent methods
Environmental statements; availability, etc.:

Jerome Waste Water Facilities Project
Olentangy Environmental Control Center and Interceptor System

Meetings:

Environmental Health Advisory Committee
Technology Assessment and Pollution Control Advisory Committee

AUGUST 31

Rules

Air quality implementation plans; various States, etc.:
Wyoming

Water pollution; effluent guidelines for certain point source categories:
Mineral mining and processing; extension of time

Proposed Rules

Grants, State and local assistance:

Underground water source protection programs

Water pollution; effluent guidelines for certain point source categories:

Mineral mining and processing; extension of time

Water pollution control:

Safe drinking water; underground injection control programs

Notices

Air quality implementation plans; various States, etc.:

California; extension of time, correction

Meetings:

Environmental Pollutant Movement & Transformation Advisory Committee

Pesticide applicator certifications:

State plans:

Guam

Pesticide programs:

Scientific Advisory Panel membership nominations, extension of comment period

Pesticide registration:

Applications (2 documents)

Rules

Air programs, energy-related authority:

New Hampshire; extension of compliance date

Air quality implementation plans; various States, etc.:

Virgin Islands; correction

Freedom of information, confidentiality of business information

Notices

Food additive petitions:

Dow Chemical Co. and Union Carbide Corp

Meetings:

Grants for construction of treatment works, required provisions for subagreements

Pesticide registration:

Applications

Pesticides; specific exemptions and experimental use permits:

Colorado Department of Health; DDT to suppress flea vectors of plague

Pennwalt Corp.; parathion on sorghum
Washington Department of Agriculture; TEPP to control twospotted spider mite

Water quality standards; State programs:

California (2 documents)

Oregon (2 documents)

SEPTEMBER 2

Proposed Rules

Water pollution control:

Secondary treatment information; waste stabilization ponds

SEPTEMBER 3

Proposed Rules

Air quality implementation plans; various States, etc.:

New York

Virginia

Notices

Meetings:

Environmental Radiation Exposure Advisory Committee

Minority business enterprises; proposed utilization policy

Pesticide chemicals, etc.; petitions:

Chapman Chemical Co.

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Captafol

O-(6-ethoxy-2-ethyl-4-pyrimidinyl) 0,0-dimethyl phosphorothioate

Pesticides; specific exemptions and experimental use permits:

North Carolina Agriculture Department, methomyl for fall armyworm

SEPTEMBER 7

Notices

Air pollutant control; pollutant standards index for local and state agencies

SEPTEMBER 8

Notices

Pesticide Registration; applications (4 documents)

Pesticides; specific exemptions and experimental use permits:

Washington State Department of Agriculture

SEPTEMBER 9

Rules

Air quality implementation plans; various States, etc.:

Connecticut; correction

Proposed Rules

Air quality implementation plans; various States, etc.:

Montana

Air programs; energy-related authority:

New York; withdrawn

Notices

Energy-related authority; progress and impact report

Environmental statements; availability:

Chlordane and Heptachlor

Pesticides; specific exemptions and experimental use permits:

Massachusetts Department of Environmental Quality Engineering; guthion to control carrot weevil

Nevada Division of Health; DDT to control flea vectors of plague
S. B. Penick and Co., et al.; correction

SEPTEMBER 10

Rules

Air pollution control and fuel economy; new motor vehicles and engines:

Model years 1977, 1978 and 1979 automobiles and light duty trucks

Proposed Rules

Air pollution control and fuel economy; new motor vehicles and engines:

Model year 1979 automobiles; testing and calculation procedures; cross reference

SEPTEMBER 13

Proposed Rules

Air quality implementation plans; various States, etc.:

California (6 documents)

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

2-chloro-N-(2-ethyl-6-methyl-phenyl) N-(2-methoxy-1-methylethyl) acetamide

Notices

Pesticide applicator certification; State plans:

Maine

Pesticide chemicals, etc.; petitions:

E.I. du Pont de Nemours and Co.

Pesticides; specific exemptions and experimental use permits:

Carbaryl to control flea vectors of plague in Colo

Chevron Chemical Co., et al

J. J. Mauget Co., Inc., et al

SEPTEMBER 14

Notices

Air quality implementation plans; Texas oxidant control plant;

Stage-I Vapor Recovery

SEPTEMBER 15

Rules

Air programs, energy-related authority:

Iowa (2 documents)

Kansas (2 documents)

Missouri (2 documents)

Water pollution control: Ocean dumping; requirements and criteria

Water pollution; effluent guidelines for certain point source categories:

Carbon black manufacturing; extension of time

Proposed Rules

Air quality implementation plans; various States, etc.:

New Jersey

Water pollution; effluent guidelines for certain point source categories:

Carbon black manufacturing; extension of time

Notices

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Sodium azide

Privacy Act; systems of record for annual compilation

SEPTEMBER 16	emission standards:	Minority business enterprises; proposed utilization policy; correction
Rules	California; authority delegation; correction	
Air pollution control aircraft and aircraft engines:	Air pollution; standards of performance for new stationary sources:	Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:
Testing and calculation procedures; corrections and clarifications of standards	California; authority delegation; correction	Glyphosate
Notices		
Food additive petitions:	Notices	Pesticides; specific exemptions and experimental use permits:
Monsanto Agricultural Products Co.	Air pollutants, hazardous; National emission standards:	
SEPTEMBER 17	California; authority delegation	
Rules	Environmental statements; availability of agency comments (2 documents)	Texas State Department of Agriculture; sodium chlorate on rice
Air pollutants, hazardous; National		

*U.S. Government Printing Office: 1976 - 650-516 P. O.: NO. 12/Regional V-1.

ENVIRONMENT MIDWEST
ENVIRONMENTAL PROTECTION AGENCY
Office of Public Affairs
230 South Dearborn
Chicago, Illinois 60604

THIRD CLASS

POSTAGE AND FEES PAID
ENVIRONMENTAL PROTECTION AGENCY
EPA-335



Return this sheet if you do NOT wish to receive this material, or if a change of address is needed. (Indicate change, including zip code.)



Environment Midwest

REGION V
UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY

SEPTEMBER 1976

Also in this Issue:

GM Builds Small
Page 9

New Toxic
Substances Act
Page 5

3M Tries 3P
Page 12

Environmental Review
Section: Their Statements
Make Impact
Page 10



A Great Lakes Child Killer?

Page 6

REYE'S SYNDROME

Reviewing the Status of Current Legislation

With the end of the 94th Congress it is worthwhile to review where legislation affecting our environment stands.

While action on the Clean Water Amendments was postponed, toxic substances legislation passed and was just recently signed by President Ford.

The Toxic Substances Act gives the federal EPA authority to require a manufacturer to test new chemicals or significant new uses of existing chemicals in cases where potential risk is found. Manufacturers must provide 90 days notice before marketing. During that time testing may be required, and if necessary, EPA may extend the pre-market testing period to 180 days. (See Story page 5)

The only legislation passed concerning water was a section of the Public Works act that provided about \$13 million for Wisconsin in additional construction grants monies.

A number of measures were not acted on, which we anticipate will get early consideration in the new Congress. These include additional construction grant finding of up to \$7 billion, the Cleveland-Wright Bill that will allow States to administer a greater portion of the grant program, and the Section 404 Amendments that might reaffirm EPA's and the State's control over the disposal of dredge and fill material in navigable waters.

Significant deterioration, which was discussed in a clause of The Clean Air Act Amendments, was also delayed until the resumption of Congress.

Finally, as we go to press, the President has signed the Solid Waste Disposal Act that will strengthen existing solid waste and resource recovery programs.

The new act proposes that the States run their own solid waste programs with the Regions taking on an active role in helping to develop programs. The new act also strengthens the existing programs financially. Allocations for development and implementation of state programs would be \$25 million for FY 78 and an additional \$25 million for FY 79. The Act also allocates \$6 million for resource recovery programs and includes a provision that States close all open dumps within 5 years.



GEORGE R. ALEXANDER JR.

Environment Midwest is a monthly newsletter published by the Public Affairs Office, Region V EPA, 230 S. Dearborn, Chicago, Ill. 60604.

George R. Alexander, Jr. Administrator
Valdas Adamkus Deputy Administrator
Frank Corrado Public Affairs Director
Rebecca R. Schorin Editor

Coming Next Month. . .

SPECIAL AGRICULTURAL ISSUE

★ ★ ★ Air Pollution in Rural Areas

★ ★ ★ Noise on the farm

★ ★ ★ EPA talks with farmers
and more!

BRIEFS



EPA to amend lead reduction regs

EPA Administrator Russell Train announced recently that EPA will amend the regulations requiring reduction of lead in gasoline in order to attain the required lead level of 0.5 grams per gallon at the earliest date achievable without causing serious gas shortages during the summers of 1977 and 1978. The regulations will still require final compliance with the lead removal regulations in 1979.

The original regulations, issued in 1973, but tied up in court challenges until this past June, limited the average amount of lead in gasoline to a maximum of 1.4 grams per gallon (gpg) in 1976, 1.0 in 1977, 0.8 in 1978, and finally reducing it to 0.5 gpg by January 1, 1979.

The decision to amend the regulations came after a number of studies all of which concluded that gasoline shortages would result if the existing schedule was enforced.

The new amendments will delete the 14.0 gpg standard for 1976 and the 1.0 for 1977, and extend the 0.5 standard to October 1, 1979.

Develop uniform index for air quality

The need for a uniform index to report the daily status of air

pollution became evident when a recent EPA Council on Environmental Quality report showed that of 33 major metropolitan air pollution indices, no two were the same.

The Pollutant Standards Index (PSI) was developed to clear the air of these varying statistics. PSI guidelines have been sent to state and local agencies. Should they decide to accept it, pollution indices throughout the country will be talking the same language.

Primarily a health related index, the PSI includes five pollutants: carbon monoxide, sulfur dioxide, nitrogen dioxide, photochemical oxidant, and total suspended particulate matter. The index will read from 0-500

with 0 as perfect and decreasing in quality as the numbers increase.

Descriptor words like, good, unhealthy, and hazardous characterize the daily air quality.

The PSI should reduce the confusion of too many indices—especially for people living on state borders. It also exhibits day to day variations, can accommodate new pollutants, and can be easily understood by the public.

Gerald Regan, Chief of the Region V Air Surveillance Branch said that "the PSI allows you to know how other cities are doing." Regan said the states will notify of their acceptance of the guidelines within two months.



POLLUTANT: Oxidants

TODAY'S HEALTH IMPLICATIONS: Respiratory ailment and heart disease patients should reduce exertion and outdoor activity.

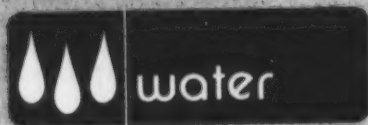
FORECAST: No change.

Example of possible PSI report for newspaper.

EPA to phase out fluorocarbons

Under a new law just passed by Congress, the EPA will soon move to ban the remaining aerosol products containing fluorocarbon gases. The FDA has already decided to phase out the gas on food, drug, and cosmetic aerosols that account for 80 percent of consumer products with fluorocarbons. The EPA action will eliminate the gas in the 20 percent of remaining products.

Fluorocarbon leakage into the atmosphere has been linked to an erosion of the earth's protective ozone layer and a possible cause of skin cancer.



Region V grants more permit power

Region V EPA has turned over more power and responsibility to Minnesota and Indiana for controlling water pollution.

George Alexander, Regional Administrator, announced approval of the States' request for a waiver to issue select water discharge permits without EPA review.

The Minnesota Pollution Control Agency and the Indiana Stream Pollution Control Board will take over the review process in their respective states. The agencies will now issue permits to publicly owned treatment works serving less than 10,000 population unless it was classified as a major discharge. The agencies will also issue permits to other dischargers with a daily discharge of 0.1

MGD or less, and dischargers of uncontaminated cooling with a daily average discharge of 1.0 MGD or less.

The Federal EPA will continue to review permits not covered by the waiver. Discharges that affect the waters of other States or which will allow toxic pollutants in toxic amounts will continue to be monitored by the EPA.

Minnesota has issued over 950 permits since it received NPDES authority in June of 1974. Indiana received permit authority in January of 1975 and has issued over a thousand permits.

Sewage manual developed

With recent passage of the Public Works Employment Act of 1976, a new manual has been developed to assist those securing or administering federal grants for waste treatment plants.

The Sewage Treatment Grants Construction Manual will be published by the Bureau of National Affairs and will provide the necessary material to determine eligibility for funds and how the grants should be administered.

The guide will be updated monthly and will include EPA handbooks which are cross-referenced to statutes, regulations, guidelines and forms.

Included in the guide will be information on how to obtain federal grants to build municipal wastewater treatment works, obtain EPA program guidance memoranda, and the full text of the Federal Water Pollution Control Act.

The guide may be obtained from the Bureau of National Affairs in Washington.



pesticides

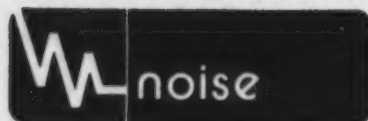
New policy on pesticide use

The EPA has provided farmers and ranchers with a simple way to combat insects and other pests not listed on the labels of EPA-approved products without violating Federal pesticides law.

Under the 1972 Federal Pesticides law, it is illegal to use a pest control product "in a manner inconsistent with its labeling." Strictly interpreted, this could mean that if a pest—be it a bug, rodent or weed—not named for treatment in the labeling of an EPA-registered product, a person could run the risk of violating the law by using the product against the pest.

The policy is entitled "Use of Registered Pesticides for the Control of Pests not Named on the Label in Agriculture and other Non-Structural Pest Control." It applies to farmers, ranchers, and persons who apply pesticides in raising trees, flowers and other ornamentals, and pesticide applicators for rights-of-way areas such as roadsides, electric powerlines, pipelines and railways.

People in these areas troubled by a rapid and unexpected pest infestation should seek the recommendation of an expert who could direct him to the proper EPA accepted pesticide that will control the pest and use only a registered EPA pesticide.



EPA dedicates federal noise enforcement lab

The EPA recently dedicated a new testing facility which will assure the effective enforcement of Federal noise control laws.

Speaking at the dedication of the Noise Enforcement Facility near Sandusky, Ohio, EPA's assistant Administrator for Enforcement, Stanley W. Legro, said the facility "will form the cornerstone for enforcement of EPA's noise reduction regulations, which were mandated by the Noise Control Act of 1972." The Act was passed in response to the growing health dangers of hearing loss and psychological disorientation resulting from excessive noise in the environment.

Legro estimated that 14.7 million American workers are exposed to sound levels posing a possible hearing hazard. An estimated 13.5 million Americans are exposed to high noise levels from transportation vehicles.

The EPA strategy for enforcing its noise regulations will depend primarily on the testing of noise products by the manufacturers themselves. The basic function of the Sandusky facility is to review and monitor this testing.



The Toxic Substances Control Act, signed by President Ford on October 8 will now give the EPA the power to direct the proper usage of chemicals which may be hazardous to health or to the environment. The EPA will also be able to order the testing of new chemicals and

other substances for safety before they are marketed.

Implementation of the Act will be decided on by the EPA administrator through consultations with spokesmen from industry, environmentalist groups, and other federal agencies.

Implementation will also include an expansion of the Central Data System on all current chemicals. The Act establishes a committee composed of representatives from federal agencies with research and regulatory responsibilities over chemicals to make recommendations to the Administrator as to what chemicals should be tested.

Before issuing a rule requiring the testing of a chemical, the Administrator must conclude that the chemical may cause or contribute to an unreasonable health or environmental risk. Findings of insufficient data may also lead to testing requirements.

The Administrator may issue rules which prohibit or limit the manufacturing, processing or distribution of a substance which causes or contributes to an "unreasonable" risk. Labeling may also be required. Following is a summary of major points of the new act:

Scope of the Law: The Toxic Substances Control Act authorizes the Environmental Protection Agency to obtain authoritative production and test data from industry on selected chemical substances and mixtures, and to regulate the substances when needed. Pesticides, food, food additives, drugs, and cosmetics are exempted from the Act.

Testing of Chemicals: The Administrator of EPA may require manufacturers of processors of potentially harmful chemicals to conduct tests on the chemicals at their expense.

Testing may be required to evaluate a chemical's health and ecological effects according to specified testing standards. An interagency committee of government experts will advise the Administrator concerning chemicals to be tested, but his actions are not limited to those recommended by the committee.

Premarket Notification: Manufacturers of new chemical substances must give the Administrator 90 days notice before the manufacture of the chemicals. Any chemical which is not listed on an inventory of existing chemicals to be published by the Administrator by November 1977 will be considered "new" for purposes of the premarket notice requirement. The Administrator may designate a use of an existing chemical as a significant new use, based on consideration of the anticipated extent and type of exposure to human beings or the environment. Any person who intends to manufacture or process a chemical for such a significant new use must also report 90 days in advance. In addition to extending the 90-day premarket review period an additional 90 days for good cause, the Administrator may issue orders and seek a court injunction, if necessary, to keep a new chemical off the market. This action may be taken pending development of test data or completion of rulemaking proceedings to ban or restrict the chemical. Among those chemicals which are or may be exempt from premarket reporting are chemicals (a) produced in small quantities solely for research, (b) used for test marketing purposes, and (c) determined not to present an unreasonable risk.

Regulation of Hazardous Chemical Substances and

[Continued on page 14]

Reye's Syndrome: Great Lakes Child Killer?

BY REBECCA R. SCHORIN

Sunday, June 13 started off as any ordinary summer day for James and Dana Fulcher and their daughters, Christine, 7, and Tracy, 5. In their home in Edgewood, Kentucky, a suburb of Cincinnati, Mrs. Fulcher, began to make breakfast and prepare the family for church and Sunday school.

But later that afternoon, Tracy came home from her dance recital running a temperature of 101°. Her mother put Tracy to bed although she felt there was no cause for worry. It was a very hot day and the auditorium where Tracy danced hadn't been air-conditioned. What's more, Tracy said that nothing hurt.

On Monday, Tracy was still running a fever. She played inside that day but in the evening when she complained that her throat hurt, Mrs. Fulcher consulted their family physician, Dr. Frank Garamy, who suggested that it might be a mild case of tonsillitis. Monday night, Tracy was given aspirin to arrest the fever.

Reye's Syndrome, discovered in 1963 by Ralph D. Reye, M.D., in Sydney, Australia, was termed a "syndrome" because it was thought to be caused by a combination of factors instead of a specific virus. Although there are now numerous hypotheses, 13 years later the cause or causes are still not defined. It strikes children between infancy and 16 years of age, most commonly between the ages of 5-8.

Tuesday morning Tracy Fulcher still had a temperature. Her parents took her to see Dr. Garamy, who diagnosed the problem as a throat infection and prescribed antibiotics.

On Wednesday the fever still hadn't broken. Tracy lay around the house lethargically. She wouldn't do anything, nor did she have anything to eat the entire day. When Mrs. Fulcher called Dr. Garamy back, he told her to try and break the fever, and Tracy was given cold baths.

Thursday at 2 a.m. the fever finally broke. Tracy took a drink of water and immediately began vomiting. She spent the rest of the night vomiting. At 5 o'clock in the morning, Tracy fell asleep for an hour. When she woke up, she was unable to talk.

Symptoms of Reye's Syndrome include initial bouts of persistent vomiting, listlessness and an "altered state of consciousness" during which the child may undergo a personality change and become disoriented. The afflicted child might also show signs of hyperactivity such as shouting or thrashing about, followed by depression.

Thursday, Tracy was taken to St. Elizabeth's Hospital in Covington, Kentucky for observation and testing. The doctors suspected dehydration or meningitis. That night, a pediatrician, Dr. Eduardo Remo, was called in. Through consultation, the physicians decided to give Tracy an ammonia test.

Blood tests for ammonia levels and the presence of the leaking liver enzymes are among the first done to identify the syndrome.

At 2 o'clock Friday morning, the doctors knew it was Reye's. "All I could think of," said Jim Fulcher, "was that we were going to lose her."

During Reye's Syndrome, the child's liver begins malfunctioning, leaking certain enzymes into the blood. The liver becomes unable to transform poisonous ammonia into urea, causing the ammonia to build up in the bloodstream. Blood sugar drops and pressure is increased on the brain, which has already become inflamed. Fatty degeneration of the intestines takes place. From the onset of vomiting to death takes no more than three or four days.

The morbidity rate is between 30-80 percent with 40 percent being cited as the most common. In cases where the disease is not lethal, irreversible brain damage often occurs.

Reye's Syndrome seems to follow outbreaks of influenza. Reye's reached epidemic proportions during the winter of 1973-74, when 349 cases were reported to the Center for Disease Control. At the same time large parts of the United States, especially the Midwest, were also under the hold of Influenza B, more commonly known as the Hong Kong Flu. Reye's may also be preceded by the chickenpox virus.

Reye's Syndrome wasn't a new word in the vocabulary of Jim and Dana Fulcher. Jim was a

Reye's Syndrome: Great Lakes Child Killer?

BY REBECCA R. SCHORIN

Sunday, June 13 started off as any ordinary summer day for James and Dana Fulcher and their daughters, Christine, 7, and Tracy, 5. In their home in Edgewood, Kentucky, a suburb of Cincinnati, Mrs. Fulcher, began to make breakfast and prepare the family for church and Sunday school.

But later that afternoon, Tracy came home from her dance recital running a temperature of 101°. Her mother put Tracy to bed although she felt there was no cause for worry. It was a very hot day and the auditorium where Tracy danced hadn't been air-conditioned. What's more, Tracy said that nothing hurt.

On Monday, Tracy was still running a fever. She played inside that day but in the evening when she complained that her throat hurt, Mrs. Fulcher consulted their family physician, Dr. Frank Garamy, who suggested that it might be a mild case of tonsillitis. Monday night, Tracy was given aspirin to arrest the fever.

Reye's Syndrome, discovered in 1963 by Ralph D. Reye, M.D., in Sydney, Australia, was termed a "syndrome" because it was thought to be caused by a combination of factors instead of a specific virus. Although there are now numerous hypotheses, 13 years later the cause or causes are still not defined. It strikes children between infancy and 16 years of age, most commonly between the ages of 5-8.

Tuesday morning Tracy Fulcher still had a temperature. Her parents took her to see Dr. Garamy, who diagnosed the problem as a throat infection and prescribed antibiotics.

On Wednesday the fever still hadn't broken. Tracy lay around the house lethargically. She wouldn't do anything, nor did she have anything to eat the entire day. When Mrs. Fulcher called Dr. Garamy back, he told her to try and break the fever, and Tracy was given cold baths.

Thursday at 2 a.m. the fever finally broke. Tracy took a drink of water and immediately began vomiting. She spent the rest of the night vomiting. At 5 o'clock in the morning, Tracy fell asleep for an hour. When she woke up, she was unable to talk.

Symptoms of Reye's Syndrome include initial bouts of persistent vomiting, listlessness and an "altered state of consciousness" during which the child may undergo a personality change and become disoriented. The afflicted child might also show signs of hyperactivity such as shouting or thrashing about, followed by depression.

Thursday, Tracy was taken to St. Elizabeth's Hospital in Covington, Kentucky for observation and testing. The doctors suspected dehydration or meningitis. That night, a pediatrician, Dr. Eduardo Remo, was called in. Through consultation, the physicians decided to give Tracy an ammonia test.

Blood tests for ammonia levels and the presence of the leaking liver enzymes are among the first done to identify the syndrome.

At 2 o'clock Friday morning, the doctors knew it was Reye's. "All I could think of," said Jim Fulcher, "was that we were going to lose her."

During Reye's Syndrome, the child's liver begins malfunctioning, leaking certain enzymes into the blood. The liver becomes unable to transform poisonous ammonia into urea, causing the ammonia to build up in the bloodstream. Blood sugar drops and pressure is increased on the brain, which has already become inflamed. Fatty degeneration of the intestines takes place. From the onset of vomiting to death takes no more than three or four days.

The morbidity rate is between 30-80 percent with 40 percent being cited as the most common. In cases where the disease is not lethal, irreversible brain damage often occurs.

Reye's Syndrome seems to follow outbreaks of influenza. Reye's reached epidemic proportions during the winter of 1973-74, when 349 cases were reported to the Center for Disease Control. At the same time large parts of the United States, especially the Midwest, were also under the hold of Influenza B, more commonly known as the Hong Kong Flu. Reye's may also be preceded by the chickenpox virus.

Reye's Syndrome wasn't a new word in the vocabulary of Jim and Dana Fulcher. Jim was a

member of the Boone County Jaycees when Reyes struck Denise Hardin of Cincinnati. Denise's parents had little money and no insurance, and the Jaycees began a fund-raising project. Jim Fulcher was the project co-chairman.

"I'm not sure if prior knowledge of Reye's frightened me even more. All I could picture was Tracy being dead," Mr. Fulcher said.

Friday morning Tracy grew more disoriented. She became combative, didn't know her parents. She began to undergo convulsions. By the time Tracy was rushed to the Children's Hospital Medical Center in Cincinnati, she had slipped into a deep coma.

The disease was familiar to the Children's Hospital Medical Center. CHMC is well known throughout the country because of its success during the '73-'74 epidemic. Out of 28 patients, all survived. Dr. John Partin has been studying the disease since 1969.

The method of treatment used at CHMC is exchange transfusions, that is, the replacement of as much of a child's blood as possible. Two ounces of blood from a vessel is drawn out and a like amount of fresh blood is injected. The procedure usually takes about two hours and by the time it is over, the child retains only about 25% of the blood with which he or she started. The exchanges are repeated every 12 hours.

After the second series of transfusions, Tracy began to respond. At 4 o'clock Saturday morning, the doctors told the Fulchers to go in and keep talking to their daughter. Tracy was unable to answer but she began to ask "what?" No one yet knew if Tracy would be left with brain damage.

Tracy slept until Saturday afternoon. When she awoke, she was weak and her speech was garbled. But she was alive, and the doctor's said that her fight with the disease was won. Reye's had left Tracy as quickly as it has hit. She would be fine; her brain was undamaged.

Saturday evening the Fulchers went home to sleep. It was their first trip home since Tuesday.

"At the time, I could hear people talking to me, I could see them, but it was all like watching a movie. I was in another world," Tracy's mother said.

On Sunday morning Tracy sat up in bed. That afternoon she was given her favorite meal: fried chicken, mashed potatoes and strawberry ice cream.

Various theories about Reye's have been postulated throughout the last few years in which the disease has become more visible. Aspirin, the most popular drug treatment of upper respiratory infections and other nonspecific ailments, has been repeatedly implicated. This data becomes more pronounced as Influenza B, often the forerunner of Reye's, is most often treated with aspirin. But the question of why less than 0.1 percent of children who get influenza develop Reye's is still unanswered.

According to Dr. Partin, two main lines of investigation are now being conducted to find the causes of Reye's. One involves the relationship between the disease and environmental toxins.

With concern over the geography of the childhood disease, the Environmental Protection Agency is considering undertaking a \$60,000 program of research on Reye's Syndrome in the Great



Mr. and Mrs. Fulcher and Tracy

Lakes Area. Richard G. Rowe, M.D., M.P.H. of the Lake Superior Basin Studies Center in conjunction with the University of Minnesota plans to study the relationship of the syndrome to various pesticides and other chemical residues within the environment.

Dr. Rowe's hypothesis to be tested is that a potentially lethal load of insecticide is accumulated in the fat tissue of some children, where it is stored in an inert state until a factor or combination of factors during certain viral infections mobilizes the insecticide - contaminated fat to the liver and brain. In cases where severe toxicity occurs in susceptible children, Dr. Rowe suggests, certain specific metabolic systems are poisoned.

Dr. Rowe, who plans to begin his one year project next month, plans to use tissue samples from cases and controls from the brain, liver, fat and other organs.

From there, Rowe plans to develop a list of suspected pesticides known to be present in the Great Lakes. In his analysis, he will conduct "pesticide scans" for chlorinated hydrocarbons and organo-chloride residues using gas chromatography.

According to Rowe, if significant differences in levels or distribution of pesticide concentrations between cases of Reye's Syndrome and controls are found, it would suggest pesticides or other chemicals present in the environment as one of the major causes and could lead to possible prevention of the disease.

The Midwest area isn't alone in a high incidence of Reye's. New York and Pennsylvania also had a disproportionate share of cases between January and April of 1974. But these two states also share some border with one of the Great Lakes.

Nor is the disease restricted to the United States. New Brunswick, Canada, had a high incidence and research is now being done linking Reye's with the spraying of the insecticide, Fenitrothion, against the spruce budworm. Recent medical statistics indicate a significant increase of cases in Quebec which also had used the same insecticide to fight the budworm.

Dr. Partin and his wife, Jacqueline, a research associate in gastroenterology, are involved in the virology line of Reye's investigation. They are presently studying the relationship between Reye's Syndrome and influenza by examining tissue biopsies with the electron microscope. He and his staff have recently published a paper on their successful isolation of influenza from liver and muscle biopsies.

According to Dr. Partin, the analogy made be made between Reye's Syndrome and polio. "Both diseases are somehow related to viruses, both are

modern diseases and both first started as a very rare occurrence and grew in incidence along with urbanization."

After Tracy came home, the Fulchers decided to try and further the study of Reye's. They contacted John and Terry Frudenberger in Bryan, Ohio, who started the first chapter of the National Reye's Syndrome Foundation (NRSF) after the disease struck and killed their daughter Tiffany.

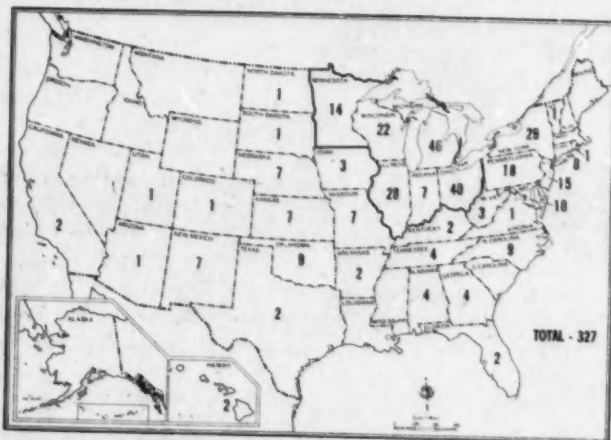
"The Frudenberger's lost their little girl, we still have ours. We wanted to help." According to Jim Fulcher the NRSF tries to educate people about the disease, organizes seminars for doctors to learn about diagnosis and raises money to keep existing research centers in action.

"We've got 16 chapters now mostly throughout the Midwest," Fulcher said. "We have no paid personnel and operate from our homes."

Tracy Fulcher is fine now. She is, active, lively and sociable. Her mother claims that she realizes how sick she was. "The other day when one of her playmates was feeling ill, Tracy said 'you better watch out, don't get sick, its no fun, they stick you with needles'."

"Tracy doesn't like people to talk about it," Mr. Fulcher said. "When her first picture appeared in the newspaper she told her mother 'now everyone will know that I was sick!'"

Epidemics of influenza generally occur every three to four years. Dr. Partin said that it is impossible to predict the next upsurge of Reye's. But if, as expected, it follows the pattern, this winter could bring a high incidence of the disease. Knowledge and early diagnosis are the first steps toward combatting it.



Reported cases of Reye's syndrome in the U.S. from January 1, 1974 April 13, 1974.

Reproduced with permission from Lawrence Corey, M.D., Viral Diseases Branch, Center for Disease Control, Atlanta, Georgia

General Motors' Gamble:

Small Cars, Big Stakes

1977-76 CATALINA FOUR-DOOR SEDAN COMPARISONS

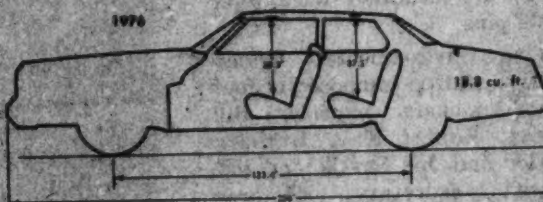
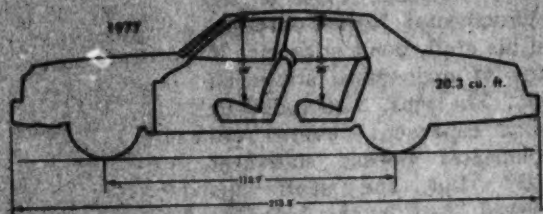


Photo B-2

	1977	1976	1977-76 CHANGE
EXTERIOR			
Length	113.9"	111.4"	+2.5"
Width	75.4"	73.9"	+1.5"
Wheelbase	103.8"	101.4"	+2.4"
Weight	2840 LBS	4400 LBS	-760 LBS
INTERIOR			
Front Head Room	38.5"	38.5"	+0"
Rear Head Room	37.2"	37.2"	+0"
Rear Leg Room	38.5"	38.5"	+0"
Rear Knee Clearance	3.7"	3.4"	+0.3"
CARGO CAPACITY	20.3 Cu. Ft.	19.8 Cu. Ft.	+0.5 Cu. Ft.

General Motors has taken a major step to conserve resources and increase fuel economy.

GM took its entire line of full-sized and luxury cars and made them smaller and lighter. All 44 full-sized cars in Chevrolet, Pontiac, Oldsmobile, Buick, and Cadillac are an average of 700-900 pounds lighter than they were in 1976.

The company claims that although the cars have been completely redesigned so that they are both lighter and shorter, the amount of interior space is the same.

The lighter cars are also more fuel efficient. GM's full-sized cars now get 17.9 miles per gallon on the average, an increase of more than 3 mpg from the 1976 average of 14.7. The luxury cars now get an average of 16.3 mpg, up from the 13.7

average of the '76 models.

Of the Big Three auto manufacturers, General Motors is the only one which has made such drastic revisions. Ford and Chrysler, at least for now, intend to keep their big cars big.

Chevrolet General Manager, Robert D. Lund, was quoted as saying, "If people are reluctant to accept changes in new cars, they're going to have to get over it. By 1980 we're going to have an entire breed of cars. All car sizes will have to change because that is the only way the manufacturers will be able to meet the government's constantly tightening requirements for pollution control and improved mileage."

GM's big gamble now lies with the consumer. In 1976 a surprisingly heavy demand for

intermediate and full-sized cars caught some people in Detroit off balance. They had expected that the concern over the fuel economy, so evident in 1974, and 1975 when gas supply was tight, would continue.

One spokesperson for General Motors saw the '76 market as "people regaining confidence in the economy." "There was a return to the market of people who wanted a big car but stayed out before, waiting to see what would happen." We think there's slow but real switch to the small cars. It's dramatic, but it's there. And we're going to lead the way."

The 1977 auto consumer information gas mileage guide may be obtained free from Fuel Economy, Pueblo, Colorado 81009. ♦

Environmental Review Section: Their Statements Make Impact

Gary Williams, Chief of the Environmental Review Section, and his staff, don't stick pins in maps of midwestern states for sport. The pins, color-coded by year, represent every environmental impact statement (EIS) that the staff has reviewed. And, by this time, the maps are studded with over 1,000 pins.

The Environmental Review Section staff is composed of four interdisciplinary experts: Bill Franz, Robert Kay, Barbara Taylor and Joe Sovcik and one expert secretary, Dolores Hynson. With the help of experts in other Region V programs, the Environmental Review Section undertakes the examination of Environmental Impact Statements (EIS) for projects in Region V.

The development of EISs began under the National Environmental Policy Act of 1970 (NEPA). According to NEPA, each federal agency must prepare a statement of environmental impact in advance of each major action, recommendation, or report on legislation that may significantly affect the quality of the human environment.

Congress required EISs because the previous practices inadequately considered the environment. Agencies' planning and decision making procedures had ignored or misjudged significant environmental impacts and would continue to do so unless a publicly accountable document was prepared and its criticisms considered before taking a major action. Now, through the EIS process, the



Gary Williams, chief of the Environmental Review Section, marks the location of another EIS

public is presented visible evidence of agency environmental planning and review.

As early in the decision-making process as practicable, an agency prepares a draft EIS for review by appropriate Federal, State and local agencies as well as the public. After comments are made by governmental agencies and other interested parties, the EIS is prepared in final form, incorporating all comments and objections received on the draft and indicating how significant issues raised during the commenting process have been resolved.

Both draft and final EISs are

filed with the Council on Environmental Quality and made available to the public. In addition to public and local agency comment, CEQ has designated which Federal agencies should review EISs according to the type of impacts involved. EPA reviews the environmental impacts of the proposed project with regard to particular areas of expertise and jurisdiction. This includes impacts related to air, water, noise, radiation, solid waste and general environmental quality.

Each statement must include a detailed description of the proposed action and alternatives, a discussion of the probable impact of the en-

vironment, any adverse environmental effects that cannot be avoided, and an assessment of the cumulative long-term effects of the action.

Actions that require an EIS includes such projects as highway construction, harbor dredging, nuclear power plant construction, river channelization and reservoir construction, just to name a few. To date, the U.S. Army Corps of Engineers and the Federal Highway Administration have written the largest share of EIS's, accounting for half the total number since 1971.

Several trends are evident regarding the number and quality of EISs that are currently being prepared.

Since 1970, when the EISs were first required, there has been a decrease in the number of statements prepared. For example, in 1971 the Department of Transportation (DOT) prepared 1293 EISs. In 1975, the number dropped to 229.

According to Gary Williams three factors contribute to the decrease. First, NEPA lacked a "grandfather clause" and projects that were underway or had already been approved prior to NEPA needed EISs. The backlog has now been eliminated.

Second, statements are now being prepared with consolidation and less fragmentation. For example, separate EISs on segments of the same highway would be consolidated into one EIS. And third, agency regulations have been refined to omit projects of lesser significance and to allow more concentrated effort on projects of potential significant impact.

Another trend noted by the EIS staff is the greater sophistication of information provided in the EIS. "In the past our review focused on requesting additional information. Today the EISs generally include all the essential information. And our

reviews now focus on evaluating the environmental impact," said Williams.

Changes are also evident in the number and type of projects for which EIS, are prepared.

"We're also seeing more environmental impact statements concerning energy like gas pipelines and power plants. And we expect to see new EISs on projects concerning alternative energy sources such as plans for a coal gassification plant located in New Athens, Illinois."

The EIS review staff expects to see continued positive results which stem from two phases of the process: before the EIS is prepared and as a result of document review. Results occur when planners build environmental concerns into projects. The EIS staff is contacted and through review of preliminary documents and site visits, their suggestions are incorporated into the project.

Bill Franz noted during a site visit on a Wisconsin highway that one of the proposed alternate routes adversely impacted the nearby wetlands. As a result of early coordination the route proposal was eliminated before the EIS was prepared.

More results become evident during the review of the draft and the final EIS. One Michigan

highway had significant adverse noise impact. Joe Sovcik recommended a modification of the highway design that would increase the buffer area. This resulted in less noise for the residents.

In addition to water, wetlands, and noise, air quality is another area that shows positive results through the EIS process. Bob Kay and Barbara Taylor worked on a proposal for the Wacker Drive Extension Tunnel in downtown Chicago. Because of the high traffic flow, the reviewers were concerned about high levels of carbon monoxide.

"We required ventilation to maintain an acceptable level in the tunnel and a signal system that would reroute traffic in the event of excessive carbon monoxide levels.

The staff has also found itself in the middle of a number of controversial projects. Lock and Dam 26, Springer Lake, in Decatur, Illinois. SR-333 in Canton, Ohio and Reserve Mining are just a few of the more memorable.

The EIS process along with an excellent staff and interagency cooperation has shown considerable results that protect the environment.

The pins are still coming. ♦



The Environmental Review Section. From left: Joe Sovcik, Barbara Taylor, Gary Williams, Bill Franz, and Bob Kay.

3M Tries 3P— Pollution Prevention Pays

BY FRANK CORRADO

3M Company—a \$3 billion-a-year-plus corporation in St. Paul—has in the past 18 months realized a \$10 million in provable cost cutting due to a new pollution control program—"3P." The "3P" refers to the program's motto "Pollution Prevention Pays."

For most businessmen, cutting costs and controlling pollution are not compatible efforts. End of the pipe pollution control equipment is expensive, and returns little or no profit. That's one reason industry fights pollution control.

But a growing number of companies like 3M are looking at new approaches to controlling pollution—approaches emphasizing better research, better engineering design and better manufacturing practices—that will eliminate tacked-on pollution control devices and at the same time cut production costs.

Among other companies that have moved quietly ahead with this kind of program here in the Midwest—Dow Chemical, Eli Lilly and St. Regis Paper—to name but a few.

The 3P program is an internal, high visibility, motivational program with awards, pat-on-the-back from the boss, and publicity for employees who find new ways to control pollution and reduce costs.

"Industry has been taking the defensive on regulations that government proposes" says Tom Zosel who managed the 3P program in 3M's Environmental Engineering and Control Department. "It's about time industry took the offensive. We want a better environment and we want to stay in business too."

This new approach for building pollution controls into the manufacturing process gets top management support at 3M. Says board chairman Ray Herzog, "Systems for controlling pollution after it becomes a problem may not be the best nor the most efficient solution in terms of materials and energy use. By preventing pollution from occurring in the first place—at the source—rather than at the end of the production processes," he goes on, "we can improve the environment and conserve materials, and save energy at the same time. This is what the 3P Program is about."

Among some of the successes during the first year of the 3P Program:

- A special ozone oxidation system was used to regenerate a chemical bleach used in developing film. The bleach is recycled, reducing the wastewater discharge and eliminating need for control facilities. Cost savings: \$1.35 million.
- Solvent-based adhesive products that emitted hydrocarbon vapors when drying were replaced with a water emulsion adhesive which emits harmless water vapor, eliminating the need for an oxidizer or solvent recovery device. Cost savings: \$700,000 per year.
- Odors produced during the drying of adhesives were reduced by a change in the manufacturing process, eliminating need for a million-dollar thermal oxidizer, and preventing a community relations problem. Net savings: \$1.15 million

One project which appears to meet these criteria emphatically and thoroughly involved the development of 3M's first agricultural chemical, Destun cotton herbicide. The pollution-prevention work began in 1973 on the product, which was marketed for the first time in 1976. Destun herbicide is used to retard growth of a common Southern weed, nutsedge, which tends to starve and smother young cotton plants.

Scientists and engineers working the project discovered that the chemical process to create Destun herbicide called for a component which had a pungent and permeating odor.

One engineer reported that:

- He returned to St. Paul, Minn., from the field visit almost alone in his portion of the tourist section of the plane.
- When he got home, the first thing he did was run into the backyard, get out of his clothes entirely and set fire to them. Only then, he bounded stark naked in the house.
- At that, the odor persisted for two more days.

The engineer's report fell rather as a bombshell on his audience, explained Dr. John Crowell, an organic chemist for 3M's Agrichemicals Project. "It was so very personal a report, so graphic; and we had no alternative chemical to use."

The question arose: "No matter how much we



Dr. Joseph T. Ung, vice president of environmental engineering and pollution control for 3M Company, is shown here—third from left—meeting with members of the Coordinating Committee which monitors the company's Pollution Prevention Pays (3P) Program. From left to right are: Ralph R. Archer, Manufacturing Council representative; Tom W. Zessel, 3P Program supervisor; Dr. Ung; Dr. Charles A. Buehler, Technical Council representative; Albert R. Enrich, Engineering Council representative, and Mike A. Bolduc, Environmental Engineering and Pollution Control Department.

spend for control, can we eliminate the odor?" There was a one-word answer, "Unlikely!" ("Only one pound a day escaping into the atmosphere could cause a noticeable, permeating odor," Crowell said.)

A group of researchers and engineers at 3M headquarters in St. Paul and at its chemical manufacturing facility at Cordova, ILL., took another look at the chemical-reaction used to create the herbicide.

"In two months," Crowell said, "we were able to extensively modify the conversion process to eliminate the offending chemical. This eliminated the possibility of any odor problem."

Additional research eliminated another source of air pollution by converting from a solvent-activated chemical process to solventless. And a twenty-fold reduction is forecast in the amount of waste per pound of herbicide produced, along with an 89 percent reduction in the amount of energy required to manufacture the product.

These changes resulted in:

- Elimination of the need for 3M to install a \$1.1 million waste-treatment facility.
- Increased production efficiencies which resulted in a \$315,000 annual savings to 3M.

"Our new way to do it was a lot better, as things turned out," Crowell said.

In another instance, pollution elimination at the source took place in a pollution-control facility. This was an incinerator at 3M's Chemolite plant in Cottage Grove, Minn., which is used to dispose of solvents, chemicals and other residue of chemical manufacturing.

The incinerator facility had been designed by 3M specifically for hazardous industrial waste. It reduces the waste to heat and ash both inert and harmless.

M. A. Santoro, superintendent of utilities at Chemolite, was cited for 3P recognition by developing a process to increase the efficiency of the incinerator operation.

This involves:

- Segregating drums of hot-burning and cold-burning wastes.
- Mixing "cold" and "hot" barrels of waste to control incinerator temperature. This, in effect, makes use of "hot" waste to help burn "cold" waste.

The changeover has reduced fuel-oil costs by \$150,000 per year. Because considerably less fuel is required to incinerate waste, the amount of sulfur dioxide released by burning oil was reduced

substantially, and particulate discharge was reduced by an estimated 2,000 pounds per year.

So far, the company claims, 70,000 tons a year of air pollutants have been eliminated and 1.5 million gallons of polluted water discharged daily have been reduced in 16 projects.

In all, thirty projects have been submitted for recognition, but, according to Zosel, the judging of these in-house efforts is hard nosed, "We look at the cost savings, the material savings, the technical accomplishment, the environmental benefits and the individual effort that has gone into a project."

A coordinating committee, composed of researchers, engineers and manufacturing personnel, meets monthly to evaluate nominations for awards. Emphasis is on recognizing the actual person who comes up with an idea, not just the department manager. "We can sometimes see results in an area like engineering in a couple of weeks," says Zosel. "In manufacturing it takes a little longer to come up with ideas, and in the laboratories it can take as long as three years to work out an idea."

According to Dr. Joseph T. Ling, vice president of environmental engineering and pollution control, there are these guidelines followed in determining 3P projects:

- "The project must, through any means, eliminate or reduce a pollutant that currently is a problem or has the potential to become a 3M problem in the future.
- "The project should exhibit, in addition to reduce pollution, environmental benefit through the reduction in energy consumption, more efficient use of raw materials, or improvement in the use of other natural resources.
- "The project should involve a technical accomplishment, innovative approach, or unique design in meeting its objective.
- "(It) must have some monetary benefit to

the 3M Company. This may be through reduced or deferred pollution-control or manufacturing costs, increased sales of an existing or new product, or other reduction in capital or expenses."

The 3M people think that in many ways they are ahead of government in this approach to pollution control. "Let's have a philosophy of regulations that's acceptable to both government and industry," urges Zosel. "In the long run, if we know what was coming we could live with strong regulations, because we could take them into account. It takes seven to ten years for a new technology to be developed."

Zosel cites the example of one State that has no hydrocarbon regulations for existing sources. "They've come up with a new catchall regulation for new existing sources that says they must have 'best available technology'."

"There were no existing regulations when we built this plant so we went ahead and built our design capacity for 95% removal. Now the State has come in and says under 'best available' we've got to add-on carbon absorption or a thermal oxidizer to our process to get 97% removal. It's just not worth it."

3M feels, however, that eventually these kinds of hassles with governmental agencies will end, and that the future of pollution control lies with programs like 3P. Says Zosel's boss, 3M's top environmental manager, Dr. Joe Ling: "This kind of program appeals to your sense of values. Adding on pollution control devices is a losing proposition. We must move to a conservation-oriented technology that will result in reduced capital outlay and reduced operating costs. This is not a new concept, but consciously applying it is."

How long will the emphasis on 3P last at 3M? "It will continue until it becomes a part of our everyday thinking," says Herzog.

[Continued from page 6]

Mixtures: The Administrator may prohibit or limit the manufacture, processing, distribution in commerce, use, or disposal of a chemical substance or mixture if he finds that these activities present an unreasonable risk to health or the environment. Labelling may be required for a chemical or any article containing the chemical.

When regulatory actions are

proposed, there must be an opportunity for comments by interested parties, including an oral hearing, and in certain instances, cross-examination. For imminent hazards, the Administrator may ask a court to require whatever action may be necessary to protect against the risk. ♦

Correction

It has been brought to our attention by B. L. Mobley, Supervisor of Environmental

Control for Davison Chemical Division of W.R. Grace & Co., that an article in our July, 1976, issue referred to silica gel in connection with poisonous pesticides. Silica gel is used as a base for some pesticides and as an additive in such things as food, cosmetics and paints. Authorities of the U.S. Food and Drug Administration tell us that silica gel is considered non-toxic by FDA, and that their agency believes it to be safe when used at levels prescribed by the FDA.

FEDERAL REGISTER

SEPTEMBER 20

Rules

Air pollution; standards of performance for new stationary sources:
Alabama; authority delegation

Proposed Rules

Air quality implementation plans:
Massachusetts
Notices

Air pollution; standards of performance for new stationary sources:
Alabama; authority delegation
Air quality implementation plans;
various States, etc.

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

Meetings:

State-Federal Water Programs
Advisory Committee

Pesticide programs:

Endrin; rebuttable presumption;
registration; time extension

State registration to meet special local needs; interim certification, various States:

Colorado

Pesticide registration:

Applications (3 documents)

SEPTEMBER 21

Rules

Waste, solid; management, treatment, etc.:

Beverage container guidelines
Resource recovery facilities guidelines

Notices

Meetings:

Administrator's Pesticide Policy
Advisory Committee

Pesticide applicator certification; State plans:

Montana
New Hampshire

Pesticide chemicals in or raw agricultural commodities; tolerance and exemptions, etc.:

Sodium chlorate

Pesticide programs:

Policy registration of pesticide products containing petroleum distillates

Registered pesticides for control of pests not named on label in agricultural and other nonstructural pest control

Pesticide registration:

Applications, Ciba-Geigy, et al (2 documents)
Pesticides, specific exemptions and experimental use permits:
Agricultural Experiment Station
Research Products Co., et al

SEPTEMBER 23

Rules

Air quality implementation plans;
various States, etc.:

Ohio

Grants, State and local assistance:

Treatment works, construction;
mandatory value engineering program

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

S-[2-(Ethylsulfanyl) ethyl]
dimethyl phosphorothioate

Notices

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.

(Z,Z)-7,11-Hexadecadienyl acetate and (Z,E)-7,11-hexadecadienyl acetate

SEPTEMBER 24

Notices

Air pollution, standards of performance for stationary sources:

Kraft pulp mills

Pesticide chemicals, etc.; petitions:

Union Carbide Corp

Pesticide registration; applications

Rules

Water pollution control, effluent guidelines and standards; cooling water intake structures; correction

Proposed Rules

Air pollution; standards of performance for new stationary sources:

Kraft pulp mills

Air quality implementation plans;
various States, etc.:

Oregon; extension of time

SEPTEMBER 28

Rules

Air quality implementation plans;
various States, etc.:

Alabama

Pennsylvania

West Virginia

Fuels and fuel additives; control of lead additives in gasoline

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

Thiabendazole

Notices

Pesticide applicator certification State plans:
Maine

SEPTEMBER 29

Rules

Air quality implementation plans;
various States, etc.:

Indiana; correction

Notices

Air pollution; ambient air monitoring reference and equivalent methods

Authority delegation:

California; Bay Area Air Pollution Control District

Meetings:

Science Advisory Board Executive Committee

Pesticide registration (2 documents)

SEPTEMBER 30

Rules

Air pollutants, hazardous; National emission standards:

Indiana; authority delegation

Air pollution; standards of performance for new stationary sources:

Indiana; authority delegation

Notices

Air pollution, standards of performance for new stationary sources:

Indiana; authority delegation

Food additive petitions:

American Cyanamid Co

Pesticide chemicals, etc.; petitions:

Thompson-Hayward Chemical Co.; correction

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:

2,4-dichlorophenyl p-nitrophenyl ether

Pesticides, specific exemptions and experimental use permits:

Agricultural Department; DDT on cotton

E.I. DuPont de Nemours & Co.; diuron, etc., on sugarcane; et al

OCTOBER 1

Rules

Air quality implementation plans;

various States, etc.:
Iowa
New Jersey
Pesticide chemicals in or on raw
agricultural commodities; tolerances
and exemptions; etc.:

Difenzoquat
Water pollution; effluent guidelines for
certain point source categories:
Photographic processing; extension of
comment time

Proposed Rules

Pesticide chemicals in or on raw
agricultural commodities; tolerances
and exemptions, etc.:

5 - Ethoxy - 2 - tricholomethyl-1, 2, 4-
thiadiazole

Air quality implementation plans;
various States, etc.:

Virgin Islands

Notices

Pesticides, specific exemptions and
experimental use permits:

Louisiana
U.S. Army
U.S. Department of Agriculture

OCTOBER 4

Rules

Grants, State and local assistance:
Conditions, policies, and procedures

Proposed Rules

Air pollution; standards of performance
for new stationary sources:

Petroleum refinery sulfur recovery
plants

Notices

Air pollution; prevention and control:
Categories of stationary sources;
addition to list

OCTOBER 5

Rules

Air programs, energy-related authority:
Kansas; extension of compliance date
Air quality implementation plans;
various States, etc.:

Arkansas
Proposed Rules

Air quality implementation plans;
various States, etc.:

Nebraska

Pesticide programs; Federal Insecticide,
Fungicide, and Rodenticide Act:
Toxicology test reports; data sub-
mittal requirements

Notices

Pesticide chemicals; tolerances,
exemptions, etc.; petitions:
Monsanto Co.; correction

OCTOBER 6

Proposed Rules

Ambient air quality standards, National
primary and secondary:
Photochemical oxidants, atmospheric;
measurement principle and
calibration procedure

OCTOBER 7

Proposed Rules

Air quality implementation plans;
various States, etc.:

Alabama

Water pollution; effluent guidelines for
certain point source categories:

Seafood, canned and preserved

Notices

Air pollution control; California, waiver
of Federal Preemption

Air pollution control; notice of submittal
to FAA of proposed aircraft noise
abatement regulations

Pesticide chemicals; tolerances,

exemptions, etc., petitions:
Chemagro Agricultural Division et al
Pesticide registration:
Applications

Pesticides, specific exemptions and
experimental use permits:

Fisons Corp. and Monsanto Co
Nor-Am Agricultural Products, Inc.
and Elano Products Co

PPG Industries, Inc. and Zoecon
Corp

Uniroyal Chemical

Meetings:

Environmental Pollutant Movement
and Transformation Advisory
Committee

OCTOBER 12

Notices

Air quality standards; ambient
monitoring applications:

Lear Siegler, Inc

Pesticide programs:

FMC Corp

Nalco Chemical Co

Pesticide registration; application:

Support data

OCTOBER 13

Rules

Air programs; performance and National
emission standards for hazardous
pollutants and stationary sources:

North Dakota; authority delegation

Water pollution; effluent guidelines for
certain point source categories:

Oil and gas extraction, onshore
segment

Proposed Rules

Water pollution; effluent guidelines for
certain point source categories:

Oil and gas extraction, onshore
segment

Notices

Air pollution, standards of performance
for new stationary sources and
National emission standards:
North Dakota; authority delegation

ENVIRONMENT MIDWEST ENVIRONMENTAL PROTECTION AGENCY

Office of Public Affairs
230 South Dearborn
Chicago, Illinois 60604

THIRD CLASS

POSTAGE AND FEES PAID
ENVIRONMENTAL PROTECTION AGENCY

EPA-335



*U.S. Government Printing Office: 1976 - 750-026 P. O.: NO. 1/Regional V-1.

Return this sheet if you do NOT wish to receive this material, or if a change of address is needed. (In-
dicate change, including zip code.)



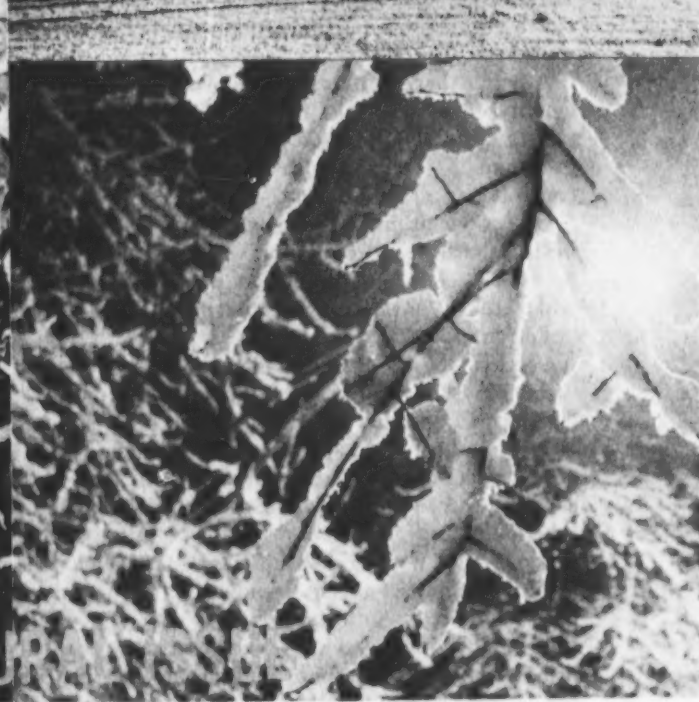
Environment Midwest

REGION V
UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY

DECEMBER 1976



THIS OLD
SEASON
THE EPA
WISHES FOR
ALL OF US



AGRICULTURAL ISSUES

EPA Talks With Farmers
page 3

Noise on Farm
page 6

Rural Air Pollution
page 5

The EPA and Agriculture

Thomas Jefferson called agriculture "the first and foremost of the arts."

We in Region V hold the same esteem for the agricultural sector and are grateful that we have an opportunity to work with American farmers. Although it is not commonly considered, there need be no dichotomy between urban and rural America. We are dependent on one another. We couldn't live without the other, nor would we want to. As Americans, we share a common concern for the American land, for the future of farming and for a healthy environment.

We have also found that urban and rural environments do affect one another environmentally. Ozone plumes from the city flow into the country air. And the quality of water throughout America often depends on the soil sediments, chemical fertilizers and pesticides that flow off the farmer's field.

The EPA has developed a number of programs which concentrate on the agricultural sector of our nation.

Among these programs are Section 208 Water Quality, and the NPDES permit (water permit program) and pesticide applicator certification programs, as well as the livestock feedlot, sediment control, and noise programs.

One of our prime concerns is water quality. In our initial efforts to improve water quality we focused on point source water pollution and didn't make adequate efforts to control non-point source pollution.

Section 108(a) of the Federal Water Pollution Control Act gives EPA authority to support projects designed to demonstrate non-point, as well as point sources control techniques. It provides for Federal grants to support any State, or any public agency to carry out projects, new methods and techniques for the elimination or control of water pollution within any part of the watersheds of the Great Lakes. The projects demonstrate the removal of pollutants or prevention of pollutants from entering the Great Lakes. \$20 million was authorized to carry out the provisions of the program, and we are happy with the projects now in progress, a number of which, like the Black Creek projects, you may read about in this special agricultural issue.

Non-point sources of water pollution include sources such as runoff from croplands, urban stormwater, and feedlot runoff. These sources are beginning to be recognized as the cause of over 50 percent of our water quality problems.

Although the discovery of the scope of the non-point source pollution is comparatively new, good planning and management are necessary. The cooperation and concern shared by the EPA and the farmers will help us conserve our resources and, together, tackle the job.



GEORGE R. ALEXANDER JR.

Environment Midwest is a monthly newsletter published by the Public Affairs Office, Region V EPA, 230 S. Dearborn, Chicago, Ill. 60604.

George R. Alexander, Jr. Administrator
Valdas Adamkus Deputy Administrator
Frank Corrado Public Affairs Director
Rebecca R. Schorin Editor

EPA TALKS WITH FARMERS

Carl Wilson, EPA Region V Soil Conservationist, recently took a trip to Fort Wayne, Indiana, to speak with farmers about their views on 208 Water Quality and other agricultural issues. Carl visited with one farmer, Ellis McFadden, who has been very active in the Black Creek Project there.

The Black Creek Project is located northeast of Fort Wayne in Allen County, and is a tributary to the Maumee River Basin. The purpose of the project is to assess the environmental impact of land use on water quality. The prime contact was made with the Allen County Soil and Water Conservation District for \$1.9 million over a five-year period. This district board in turn sub-contracts with Purdue University for the research, and with the Soil Conservation Service for planning and technical assistance. The watershed has approximately 170 farm families and a contract is written with each farm family to install farm and structural practices for water quality improvement.

Here's how a part of the conversation went:

CW: How would you suggest we get the farmers to participate in water quality meetings, to get the practical aspects of putting the best management practices on the land, what would you suggest?

EM: Probably if there was a meeting or a seminar with a title that would really shock them you would probably get a lot of people . . .

CW: Ellis, we came down here to visit with you and get your opinions about how farmers are interacting with the EPA.

EM: I think back when the Black Creek project started the rank and file farmers didn't have too many complimentary words to say with EPA officials. But working on this project with you and the EPA people from the Chicago office coming down here to see what's really taking place out on the land, and I've talked to numerous other farmers and they have a little bit different respect now for EPA officials than they did several years ago.

CW: How do you see farmers becoming an active part in 208 planning? What is it that's not understood about the 208 program?

EM: Number one, when you mention 208 to most

farmers, I don't think they'd know what you were talking about at this point. But I think, you talk about water quality, and then they understand what's being involved. So I think it's just a matter of terminology, of how it is presented to them.

CW: Like the title, We're going to regulate you if you don't come out . . . ?

EM: This is right. This is the kind of terminology that the EPA has to farmers. But I think eventually this has been my point. I've been involved in soil and water conservation for about nine years, and in the State Association for the last four or five years and we've talked about this. So I'm aware of these things. But some of my neighbors who haven't had the opportunity to sit in on these meetings in Chicago, or IJC (International Joint Commission) meetings in Toronto, have a different feeling.

I've long been an advocate that we in agriculture complain about people hitting us with regulation and so forth but we don't take the time to understand what's involved.

Continued on next page



EPA Soil Conservationist, Carl Wilson, discusses agricultural issues with Ellis McFadden in Fort Wayne.



Continued from page 3

CW: That's one of our major concerns, that is, getting rid of unreasonable regulations that a farmer can't live with. We want to get projects that are reasonable, efficient and practical . . .

EM: I think most farmers are rather practical. As long as it's sensible and practical I don't think there would be too many farmers that who would object to regulations that would come along to better water quality.

CW: Ellis, besides the water quality programs, you know we have other programs in the EPA. We also evaluate pesticides and we'd like to get some kind of feeling you have about pesticide regulation.

EM: Well, there's a lot of people concerned about having to be licensed. But as I see it, these chemicals are not to be played with, they have to be applied right. And so really I don't feel too bad about having to be licensed.

Through this, you learn more pesticides in learning about how to apply them. I know what pesticides will do. I've used them for a long time and agriculture would be in sad shape today if it weren't for these chemicals and so the information I get out of having to pass these tests is for my own benefit.

CW: We are hoping that the program would move in that direction. So we shouldn't condemn pesticides on a worldwide basis. DDT has been beneficial on a health basis in some underdeveloped nations. But overuse is not wise use. We can develop substitutes and this is what we've been doing and what we'll continue to do. Ellis, tell us about the progress on the Black Creek project.

EM: It's a demonstration project and as a

supervisor and project administrator I've gotten a lot more involved than when we started several years ago. But I wanted to be sure of the results we got. I was a little bit concerned at first that the results wouldn't be accurate. But I'm willing to say at this point that if we get results they will be accurate, and so this is my biggest concern. And I've been involved in other projects, in other studies to compare with this. When we presented this, one person said he would like to see the results to be nicely bound so it can sit in every library in the country. Well, to me those studies aren't worth too much. I think it's something that needs to be practical and something we can use. The reason I spent a lot of my time on the project and tried to understand it was so that I can say to other farmers, "This is something that will be true and accurate."

CW: Ellis, what other environmental issues are the farmers thinking about these days?

EM: Here in Indiana through the State Association we're trying to come up with a sediment control proposal. This takes in a lot of the same things as Black Creek. But it's all a matter of education, I think. Some farmers will think that these are things that we have to do. And others will have to sit on it and think a while about how much is involved before they say yes or no.

We're also concerned about any kind of regulation, mostly the same kinds of things that you people are involved with on a day to day basis.

CW: Well, as you know, we've come a long way with the point source problem, but we're just now getting started with the non-point source. But I think we should stop and give credit to your work. You've been doing these things a long time and we just didn't use the right terms . . .

EM: Well, this kind of interesting. Not long ago I was at a meeting where there were candidates for legislature and something came up about are the farmers any better off than they were 2000 years ago. And my answer was that we don't have to go back that far. You can look at the last forty years and we've come a long way. I think this past summer has been a real impressive one on that point. This is when soil conservation started forty years ago and people began to realize we just don't have as much water as we'd like to have. It's not only having good water quality but we're also going to have to conserve the water and do a better job with the amount we have.

CW: And the efficient use of water, always improves the quality of it . . .

EM: Yes, it's a matter of education. We've got to come out to the meetings. It's good to see that the attitude of many farmers around here has reversed completely since the project got underway. ♦



Rural Air Pollution

Air pollution is not something that stays confined in a certain area and spreads no farther. Over the past few years, EPA has been engaged in a program of field monitoring studies to assess the extent and the causes of high ozone concentrations that have been observed in the rural areas of the United States, and in particular the eastern portion. A large scale study was conducted during the summer of 1974 that covered an extensive area of the Midwest and the East. The final report containing the results of the study was published in March 1975.

One result showed that recent measurements of the downwind of urban centers demonstrate that an identifiable urban plume of oxidants and oxidant precursors can be found as far as thirty to fifty miles from the urban center.

The central portions of the high

pressure systems in the mid-western portion of the country have been usually found to contain the highest rural ozone concentrations.

Following are some of the conclusions of the study on rural ozone concentrations:

1. The NAAQs (National Ambient Air Quality Standards) for photochemical oxidants was exceeded twice as frequently at rural stations as that the urban stations. Night concentrations of ozone were on the average three to five times higher at the rural stations relative to the urban sites.

2. An areawide system of high ozone concentration can exist in which most features suggestive of precursor origin have been smoothed out, but a short-range urban influence on both hydrocarbon and ozone con-

centrations can be observed. The evidence indicated an observable urban influence extending approximately 30 to 50 miles downwind of a city.

3. The observed high ozone concentrations cannot be explained in terms of air flow from a specific point source or a single urban-industrial area source. In other words, no specific trajectory could be uniformly associated with the arrival of air containing either high or low concentrations of ozone at any of the rural sites.

4. The results of this research provide substantial support for transport of ozone makers from urban areas to the rural stations under appropriate meteorological conditions. During transport and in the presence of sunlight, ozone is synthesized.

5. The results of this research program imply that the control of

Continued on page 12

City	Designation	Maximum Concentration (ppm)	Days Exceeding Standard (%)	Number of Violations (Total)
Canton, Ohio	Urban	0.14	44	148
Cincinnati, Ohio	Urban	0.18	44	54
Cleveland, Ohio	Urban	0.14	26	51
Columbus, Ohio	Urban	0.15	27	113
Dayton, Ohio	Urban	0.13	35	114
McConelsville, Ohio	Rural	0.16	56	239
Wilmington, Ohio	Rural	0.18	58	259
Wooster, Ohio	Rural	0.17	55	262

Ozone Data June 14-August 31, 1974



NOISE IN THE COUNTRY

by HORST WITSCHONKE

When I volunteered to write a few words on rural noise, I thought it was going to be a snap. I had temporarily forgotten that I was a city slicker: a childhood in Berlin, Germany, and the rest of my days in Chicago. After a search of the literature and a lot of imagination, I came to the conclusion that most of the rural areas are necessarily quiet.

Some of the noise in rural areas is caused by highways, grain dryers, aircraft, motor boats, automobiles, trail bikes, chain saws, farm equipment and . . . crickets. Yes, crickets. On one occasion when I was measuring noise from a factory, just a few crickets caused higher noise levels in the high frequency bands than the factory. In fact, the noise from the cricket was in violation of the Chicago Noise Ordinance. But just try and explain that to crickets.

One of the major noise complaints in rural areas during the fall and early winter months is from the grain dryers. During harvest time, in order to store the corn in closed bins, it must be thoroughly dried. Warm air is blown through the corn and the moisture is carried away. It is not uncommon for grain dryers to run 24 hours per day during the peak harvest period. Grain dryers are found at grain elevators and on farms of 300 or more acres. In the late evening hours, when noise from highways dies down, and the general background sound level drops, grain dryers can be heard throughout a two or three mile area.

Noise from trucks, motorcycles and cars on our highways is by far the major contributor of noise to the rural environment. Federal regulations have been passed that require new medium and heavy trucks to conform to a maximum noise limitation. This regulation will take effect on January 1, 1978. A further reduction in the maximum noise level from these trucks is required on January 1, 1982. As the quieter trucks start to replace the older ones on our

highways, there will be some relief from the noise into the rural environment.

States and communities also get complaints about noise from trail bikes and snowmobiles. Such noise can have a direct effect on wildlife. In winter for example, when deer have to conserve energy because of lack of food, sudden noise in the back woods can disturb them and cause them to become very active, thus burning up their reserve fat. Deer find the best food in the area of near rivers and creeks. When this area is heavily traveled by snowmobiles, the deer pick up and leave.

Finally, there is noise from farm equipment. This noise, however, is of concern, mainly because of operator exposure. The farm equipment industry has worked hard to reduce noise levels from their equipment.

There is one exception to this. A small community near a farm is up in arms because every morning at 6 o'clock, the farmer shoots off his propane cannon to chase the birds off his field with an enormous bang.

Perhaps this is the modern day answer to the rooster.

The United States Environmental Protection Agency (EPA) is assisting Communities interested in developing noise control ordinances. Sound Level Meters are available on loan from the regional office to communities interested in surveying the noise environment to determine their needs. EPA also conducts Noise Workshops for public officials, covering basics of acoustics, noise measurement, ordinance development and enforcement strategies. The next Noise Workshop will be held in St. Louis, Missouri on January 26-27, 1977. For assistance and further information, Please contact Horst Witschonke, Noise Control Specialist, U.S. EPA Reg. V, 230 S. Dearborn, Chicago, Illinois. Phone (312) 353-2205.

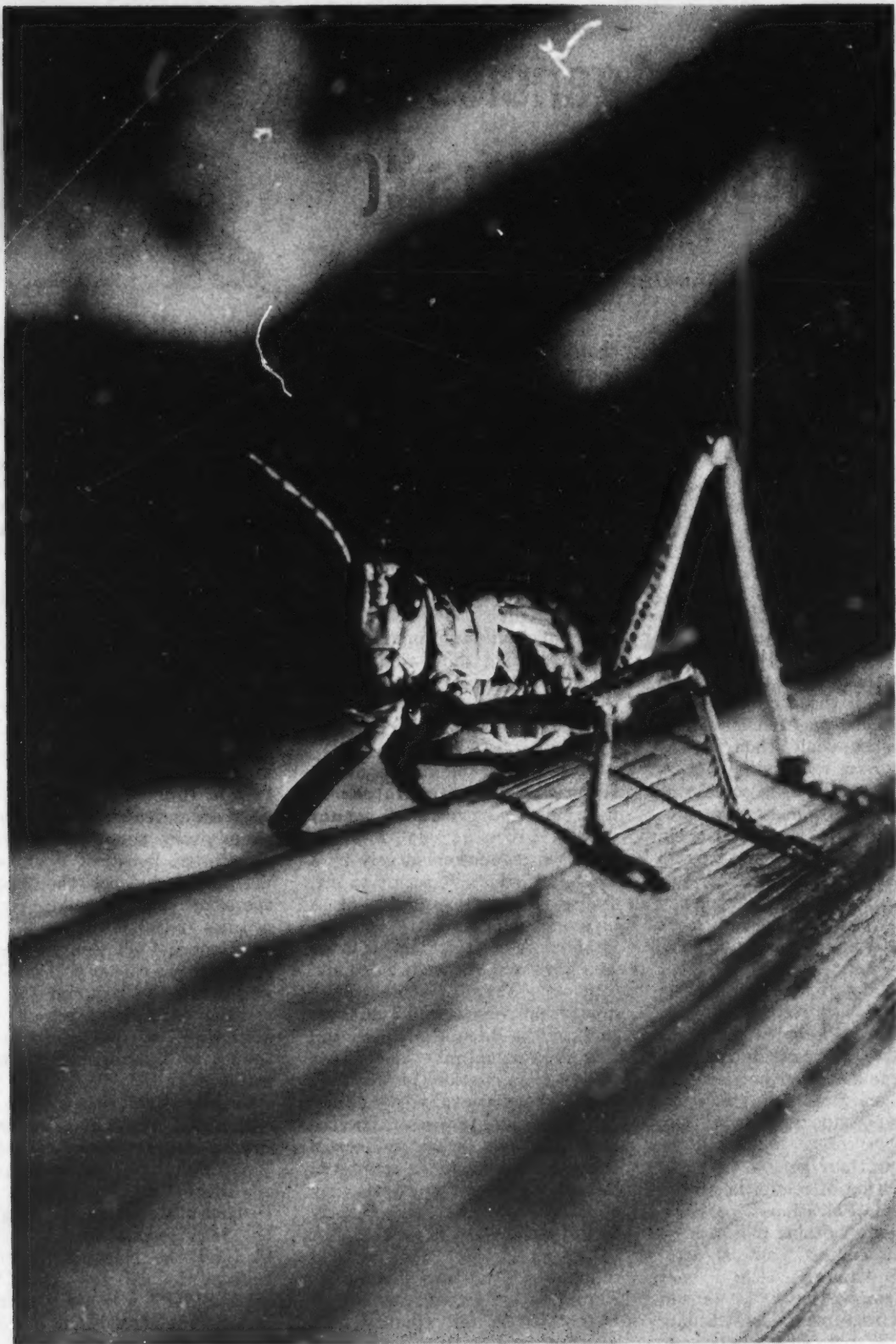


Photo: EPA Documerica—Fred Ward

GUEST COLUMN

Regulatory Agencies: Servants or Masters?

By SAMUEL R. ALDRICH



Editor's Note: Dr. Aldrich is Assistant Director, Agricultural Experiment Station, University of Illinois at Urbana-Champaign.

The viewpoints opinions presented in this article are those of the author and are not necessarily reflective of EPA policy.

I consider it axiomatic that in a democracy any government agency should strive to accomplish the goals of the majority of citizens if those citizens were well informed on each issue and their wishes could then be expressed in a referendum. It is obvious that these conditions cannot easily be met. I think it imperative, however, to bear in mind that government derives its power from the consent of the governed. No government agency should attempt to exercise more power than citizens have delegated to it.

Based upon these premises, what is the track record of federal regulatory agencies in environmental matters? I believe a case can be made for the view that citizens get more than they anticipate, perhaps more than they desire.

Here are four general steps in the evolution of regulations.

Step 1. Politicians perceive then to be a suitable platform on which to run. A political campaign, though the best mechanism we have, is an imperfect instrument for dealing with issues that can easily become emotionally supercharged.

Step 2. Legislation is often drafted in terms of general goals and broad outlines of what is to be accomplished with inadequate consideration of the impact at the point of application. For example, the Federal Water Pollution Control Act Amendments of 1972 (PL92-500) stated that it is the national goal to eliminate the discharge of pollutants into navigable waters by 1985; and, where attainable, to achieve water quality that will provide for protection and propagation of fish, shellfish, and wildlife and provide for recreation in and on the water by 1983. Each state is directed to develop major plans by specific dates.

Step 3. Implementation of the statutes is delegated to an appropriate government agency which proceeds to develop proposed regulations largely by a legal staff which, it seems to me, tends to be composed of a disproportionate share of environmentally oriented lawyers who have minimal knowledge and controls. There is inadequate input from persons and industries that will be directly affected and that have insight into the complex effects of regulations.

The regulatory agency publishes its proposals in the *Federal Register* and allows a short time for public comment. Subsequently, the proposals may or may not be significantly modified.

Let us look at the NPDES (National Pollution Discharge Elimination System) section of PL92-500 (Water Quality Act Amendments of 1972) as applied to agriculture.

The *Federal Register* indicated that a permit would be needed for all point sources. At the outset, these included all pipes that discharge to navigable waters and did not exclude individual tile lines from farm fields. To qualify for a permit, it would be necessary to indicate the amount of water discharged and the amount of each pollutant per year. To anyone who understands tile drainage systems, this was totally impracticable, if not impossible. The Agency received a great deal of flak and tile lines were eventually excluded.

The Act (PL92-500) indicated that confined livestock operations were to be treated as point sources. At this juncture, the Permit Branch, U.S. EPA, invited six agriculturists to serve as an advisory panel to deal with permits of livestock operations. We arbitrarily set the size of operation that would require permits (1,000 feeder cattle; 700 dairy cows; 4,500 slaughter hogs; etc.) with the caveat that a permit would also be required for any smaller operation which was identified by an appropriate agency as a significant source of pollution.

Step 4. The regulations are challenged in court by some special interest group. On June 10, 1975, Judge Thomas Flannery of the U.S. District Court, District of Columbia (Washington, D.C.) in response to a motion filed by the Natural Resources Defense Council, Inc., ruled that the U.S. EPA was not authorized to exclude any point sources irrespective of size.

The decision of Judge Flannery to which I have referred is one of three recent court decisions which set a pattern of broadening coverage or greatly accelerating the implementation of regulations. Here is a brief review of them:

Decision Number 1: Livestock Permit Program. The Permit Branch and the Advisory Committee developed a plan that focused on the very large livestock operations, thus accomplishing the most per dollar and at the same time allowing permits to be processed within a reasonable period of time. In retrospect, it was unfortunate that the language did not state that smaller sized livestock operations would be addressed later rather than to state that they would be excluded from the permit requirement unless individually declared to be a significant source of water pollution after an on-site inspection.

If the court orders were strictly interpreted and enforced, the permit program would be in danger of collapse because of the sheer number of farms involved. At the present time a modified plan is in effect which focuses on farms with over 300 animal units and reduces the number of farms involved from 94,460 to about 3,240.

Decision Number 2: Discharges to Navigable Waters. The U.S. District Court, District of Columbia, ruled in March 1975 that the Corps of Engineers was without authority to apply its own interpretation to the broad language of the Act. The court ordered the Corps to issue regulations "recognizing the full regulatory mandate" which the court determined to entail "the maximum extent (of jurisdiction) permissible under the commerce clause of the Constitution."

The Corps responded as follows:

"Federal permits may be required by the rancher who wants to enlarge his stock pond, or the farmer who wants to deepen his

irrigation ditch or plow a field, or the mountaineer who wants to protect his land against erosion."

Decision Number 3: Expanded Coverage Under 208 Programs. The Water Quality Act Amendments of 1972 directed the governor of each state to identify each region "which, as a result of urban-industrial concentration, or other factors, has substantial water quality control problems." Section 208 then directs him to designate an agency to develop an inventory of the sources of pollution and a plan for their control *within two years*. The key item is the identification of regions that have substantial problems. But a U.S. District Court, Washington, D.C., extended the coverage to *include the entire state*, rather than focusing on the most acute problem areas.

The effect of the three decisions in district courts in Washington has been to thwart any attempt to set reasonable priorities to pollution abatement in terms of: a) significance of the source of pollution, b) the geographic areas to be included, c) the time required to get the job done, and d) the benefits of control in relation to costs.

In the matter of regulatory agencies, there is danger that we are building Frankensteins—entities constructed to serve the wishes of citizens, but once built they become their own thing, out of effective control by those who invented them. I do not imply an insidious scheme. Rather, I think it is due to a combination of extreme environmental advocacy on the staffs of agencies, poorly informed but friendly courts far removed from the agricultural scene, unchallenged acceptance by the news media of statements of well-intentioned but only narrowly-informed environmental activists, discounting the views of scientists and industry representatives, and finally the fact that no one within an agency perceives it to be in his best interest to object very strenuously to court-ordered growth of his

agency.

I think it significant also that most persons closely associated with the development of regulations are at best only partially aware of regulations being developed in other branches of their agency and within other agencies. Like the blind men trying to describe an elephant, they fail to comprehend the whole animal. For example, the price of beef in the supermarkets is affected only slightly by a requirement that a certain insecticide not be applied to alfalfa within ten days of harvest. The same can be said for a ban on aldrin, dieldrin, chlordane and heptachlor for corn insects; or the Occupational Safety and Health Act requirements; or the licensing of pesticide applicators; or permits for animal confinement systems; or land use and sediment control regulations that are being considered; or the banning of DES as a feed additive. But the impact is dramatically different when the word *and* replaces *or* in that sentence. The entire complex of regulations that directly apply to production practices plus those that raise the cost of fertilizer, pesticides, machinery, electrical power and other production items have a significant impact on food costs. And no cost has been included for the "lost opportunity" that results from shifting agricultural scientists from research on more efficient food production to research on environmental matters.

I sense a tendency for agencies to present the worst side of things. Consider these two statements from U.S. EPA *Environmental Facts* (July 1973):

" . . . 17,197,531 acres of wetlands have been destroyed in seven states alone (45.7 percent)."

" . . . 4 billion tons of sediment are washed into streams annually as a result of land misuse."

In response to a request for clarification, I received this: "An examination of Interior and Agriculture Department documents permits me to say with some assurance that 45.7 percent

Continued on page 14

The Pesticide Applicator Certification Program

farmers learn
about pesticide usage

Back in 1947 when pesticides were called economic poisons, both the value and danger of these substances were known. People knew that pesticides protect crops and livestock from insects and disease, retard the growth of fungi, and stimulate plant maturity. Pesticides were used already at that time in products that sanitize, sterilize, and disinfect. And, it was also known in 1947 that pesticides are toxic, that they may cause serious illness—even death when misused.

That year, Congress passed the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) to regulate the marketing of the products. The law required federal registration of pesticides shipped across state lines and made it unlawful to sell unregistered substances in interstate commerce.

But FIFRA didn't address itself to actual pesticide use—nor did it control pesticides produced and used within the same state.

FIFRA was a beginning. But despite the law, misuse and overuse of pesticides still continued despite extensive labeling and use instructions. Some of these incidents caused serious effects on man and the environment.

In 1972 Congress amended the FIFRA to cover all pesticides used in the United States, instead of only those shipped across state lines. The new law also provided for stronger enforcement

provisions, made pesticide misuses unlawful, and contained a number of other key regulatory provisions.

Two of the key provisions affecting pesticide users are 1) EPA must classify all pesticide products for either general or restricted use, and 2) Restricted use pesticides may be used only by or under direct supervision of certified applicators or under such other regulatory restrictions as EPA may require. Congress then recommended that the amended FIFRA should be fully implemented by October 21, 1976. This date was later postponed for one year.

The amended FIFRA provides for two types of applicators: commercial and private. Commercial applicators will generally be those who apply pesticide for a livelihood and they are defined as those who use or supervise the use of restricted pesticides on any property other than as provided by the definition of "private applicator."

A private applicator is in most cases a farmer, rancher, or orchardist, who uses or supervises the use of restricted pesticide products to produce an agricultural commodity on property owned or rented by him or his employer. A private applicator may also apply pesticides on another person's property if no compensation is involved other than trading of personal services between producers of agricultural commodities.

Private applicators, whether they are farmers, ranchers, plant propagators, orchardists, or other producers of agricultural commodities are normally confronted with a rather narrow range of recurring pest problems. Accordingly, the private applicator standards reflect the need for practical knowledge of pest problems associated with particular farming operations.

As a minimum, a private applicator must show that he possesses a practical knowledge of pest problems, associated with his agriculture operation plus the proper storage, use, handling, and disposal procedures for pesticides that he needs including proper disposal of used pesticide containers. The practical knowledge includes the ability to: 1) recognize common pests and pest damage, 2) read and understand labels and labeling information including any specific disposal procedures, 3) apply pesticides in accordance with label instructions and warnings including ability to prepare proper solutions, 4) recognize local environmental situations that must be considered, and 5) recognize poisoning systems and know what to do in case of an accident.

Under the amended FIFRA the competence of private applicators is to be verified by the state agency using a system to ensure that such persons are qualified to use restricted use pesticide products. Written or oral tests, or

other equivalent procedures may be used.

Although EPA was given responsibility for developing and publishing standards of competence, the amended FIFRA reflects Congressional intent that states assume primary responsibility for certification of applicators. State certification plans must be reviewed and approved by EPA.

Federal regulations established 10 occupational categories for commercial applicators. In developing the state plans, states may adopt these categories as needed, propose establishment of necessary subcategories or deletion of unneeded categories. States may also request the EPA's Administrators approval to add major categories to meet local conditions.

The 10 agricultural categories are 1) agricultural pest control, 2) forest pest control, 3) ornamental and turf pest control, 4) seed treatment, 5) aquatic pest control, 6) right of way pest control, 7) industrial, institutional, structural and health related pest control, 9) regulatory pest control, and 10) demonstration and research pest control.

Competence of commercial pesticide applicators is to be determined by written examination and as appropriate by performance testing. All commercial applicators are required to demonstrate practical knowledge of the principles and practices of pest control and the safe use of pesticides.

Testing is based on examples of problems and situations pertaining to the particular category or subcategory of the application certification.

Following is an update of the certification program progress by each state in Region V as composed by the Pesticide Branch of Region V EPA.

The pesticide application

program is on schedule and it is anticipated that all states will have certified a vast majority of their applicators by October 21, 1977.

ILLINOIS

Pesticide Branch staff reviewed and commented on the September 3, 1976 draft State plan. Programmatic issues have essentially been resolved, except for editorial corrections and revision of category 7 certification requirements by the Illinois Department of Public Health. The next submission of the plan will probably come from the Governor by December.

To date, the Illinois Cooperative Extension Service (ICES) has conducted 121 private and 57 commercial applicator training schools. Approximately 7,003 private applicators have successfully completed training and will be eligible for certification once EPA approves the State Plan. Training has been offered in six commercial applicator categories, and 5,857 commercial applicators have participated in these programs.

INDIANA

Notice of full agency approval of the State plan on a contingency basis was signed by the Regional Administrator November 9, 1976, and submitted for publication in the *Federal Register*. The Indiana Pesticide Use and Application Law becomes effective October 21, 1976, and Indiana has adopted regulations necessary to implement this law.

The Extension Service, has completed the bulk of category training for commercial applicators (approximately 5,000 individuals). The majority of training programs for private applicators will begin this fall and winter. So far, 3,000 private applicators have attended training sessions.

MICHIGAN

Michigan has received contingency approval of its State plan, and is currently promulgating regulations for full approval. The effective date for the certification provisions of the Michigan Pesticide Control Act of 1976, is October 21, 1977.

Continued on page 12



Photo courtesy USDA

RURAL AIR

Continued from page 5

hydrocarbon in any individual city will reduce but not necessarily prevent the occurrence of high rural ozone concentrations in excess of the NAAQS, at any given rural site. The implication is that the release of hydrocarbons the oxides of nitrogen from all combine to generate appreciable quantities of ozone over wide areas.

Carl Nash, a chemical engineer in the EPA Region V Air Planning Section said that carbon monoxide pollution is not a large problem in rural areas because it is confined chiefly to areas where there is excessive traffic flow.

Nash said that his office is presently working on strategies of controlling hydrocarbon pollution in rural areas which fall into categories of stationary source controls and mobil source controls.

According to Bruce Carhart, also of the EPA air planning section, two processes are at work simultaneously in relation to photochemical oxidants in the rural areas. "The pollutants that are generated in urban areas travel downwind of the cities. At the same time, the pollutants undergo a chemical reaction with sunlight over time. So that both of these factors working together cause oxidant problems to be more exaggerated in the country." Carhart said that the problem is often severe during the summer but "essentially disappears during the winter."

"How big is the problem?" Carhart asked rhetorically. "How big is Region V?" was his answer.

Another very different type of pollution in the country is specific to rural areas and involves the problem of flying dust from grain elevators which process corn. Although the problem is a seasonal one, it is also industry

wide.

The flying corn dust is referred to by the agriculture industry as "bee's wings." Depending on the direction of the wind, the dust may blow out into empty fields or it may blow into the main area of town, which has caused many citizens in various rural areas to complain.

John Paskevich, of the air planning section, said that new standards for grain elevators, and loading and unloading docks, are now being prepared and will be introduced shortly. The new regulations will lower the possible emissions and determine violators. ♦

PESTICIDE APPLICATORS

Continued from page 11

Although training is not mandatory for either private or commercial applicators, the Extension Service has begun training programs, strictly on a voluntary basis. A total of 2,000 private and 1,350 commercial applicators have received either partial or complete training. The bulk of the training will be conducted this winter and during the spring of 1977.

MINNESOTA

In a meeting between Minnesota Department of Agriculture and Region V Pesticide Branch personnel on September 29, 1976, the lead agency proposed a number of changes in the plan. The plan will now contain a 5 year certification interval, for most commercial applicators, with training or proctored written examination required for renewal.

Extensive regulations will be required to provide the State Lead Agency sufficient legal authorities to implement the State plan.

To date, 2800 private and 2200 commercial applicators have attended and completed training

sessions conducted by Minnesota Cooperative Extension Service specialists and county agents. According to Extension officials, 5,000-7,000 additional private applicators will have completed training by March 1977.

Formal classroom training by county agents and specialists is the most utilized training method. However, small numbers of applicators have completed the EPA programmed instruction course, auto tutorial training, and the EPA private applicator workbook.

OHIO

Region V received the Governor's submittal of the Ohio State plan on September 24, 1976. Draft State regulations are currently in review.

Private applicators trained through September 30, 1976 total 4,472. Training sessions are being held in accordance with the 12 categorizations for private applicators outlined in the State plan. These county level programs will handle the majority of applicators. The Ohio Cooperative Extension Service estimates that another 10,000 private applicators will complete training by April 1977.

Approximately 5,303 commercial applicators have been trained, and training programs for commercial applicators are scheduled through March 1978.

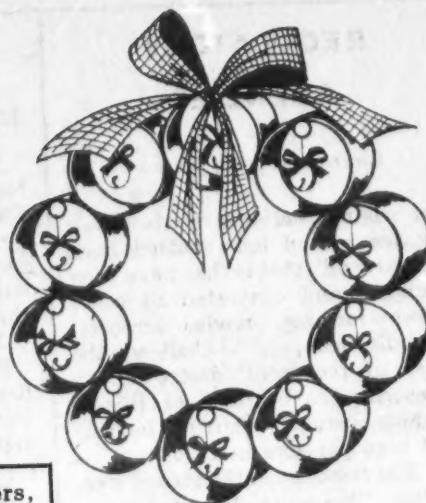
WISCONSIN

Although the June 11, 1976 Governor's State Plan submittal was programmatically sound, uncertainty regarding the passage of required enabling legislation has prevented the State Lead Agency (SLA) from finalizing the plan. Unfortunately, the problems with the State plan have somewhat delayed pesticide applicator training efforts. Although the Wisconsin Cooperative Extension Service has the necessary funds and training materials, no training

Continued on page 14

HOLIDAY IDEAS

There are a lot of projects that you can do in preparation for the holidays that are not only fun but also reflect your environmental concern. Following are a number of these holiday ideas compiled by the Ohio Environmental Protection Agency.



Wrapping Gifts

Tree Cycling

Buy a live Christmas tree, with ball and roots, and plant it after the holidays. This is a great way to make holiday memories linger for years. Take photographs of your family planting the tree. Take additional photos each succeeding year as your family decorates your outside tree. Your series of photos will gauge your family's and your tree's growth.

Encourage your local government's waste collection department to recycle cut trees by grinding them into organically valuable mulch, instead of incinerating or burying them. The mulch can be used on public park trails or flower beds, or made available free of charge to the residents of your community. If you choose to dispose of your own cut tree, you can recycle it by:

- Cutting or grinding the limbs and adding them to your compost pile or using them as a base to start a compost pile.
- Tying the tree upright to a post or tree, and hanging a feeder or suet for the birds on it. In the spring, you can use the branches as mulch in your garden or flowerbeds.
- Grinding the tree for mulch. Plants mulched with 3 or 4 inches of chips or needles grow better because moisture is retained and roots are insulated from extreme temperatures. Weeds will be few and easily uprooted.

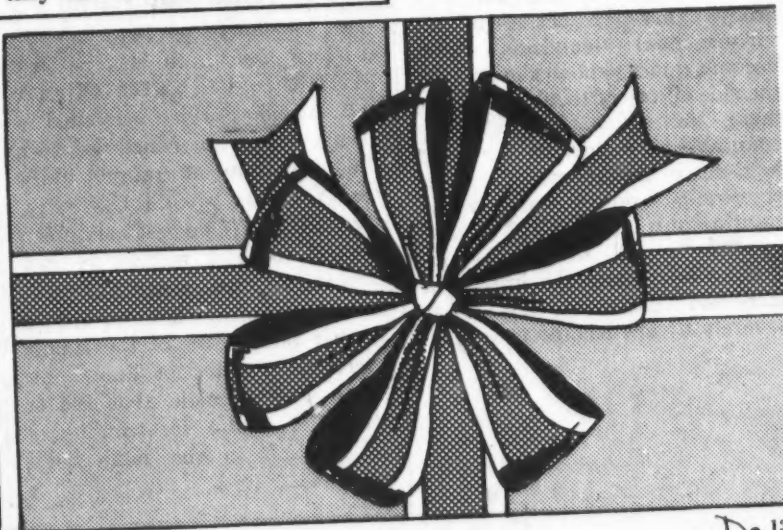
Recycle old newspapers, magazines, road maps, tissue paper and colorful department store bags as creative wrapping paper for your gifts. The packages can then be decorated with cut-outs from magazines and last year's Christmas cards, scraps of yarn and cloth, and construction paper. You can hint at the gift or the personality and tastes of the recipient by the way the package is decorated.

Wrapping paper that is used once and thrown away is costly, both financially and environmentally.

Save the wrapping paper you receive this year to use again next year. If you must buy wrapping paper, avoid foil papers because they cannot be recycled.

After celebrating an Eco-Holiday this year, your family will be able to look on a holiday season spent working, sharing, and enjoying together. And the Earth will thank you for your thoughtfulness.

HAPPY HOLIDAYS!



REGULATORY AGENCIES

Continued from page 9

of original wetlands in the seven states named have indeed been 'destroyed', that is they have been drained and converted to other uses—farming, roads, airports, subdivisions, etc." I challenge the use of the word 'destroyed' to describe the hearland of Illinois which averaged about 130 bushels of corn per acre in 1975.

The response to the second item was: "Vis-a-vis the sediment, however, a correction is in order . . .

The activities of man (cultivation, construction, strip mining) account for perhaps two-thirds of this figure . . ."

My question was addressed to the application of the phrase 'as a result of land misuse' to all sediment. The reply removes from the total amount that sediment not related to man's activities, but leaves me uncomfortable with lumping all cultivation, construction and strip mining into the category of misuse.

It is my contention that in the future, legislators must assume greater responsibility for oversight of the activities of regulatory agencies to assure that they carry out the legislative intent.

I feel also, that individuals or groups that are active in environmental decisions must become more knowledgeable of the side effects of regulations they favor and then be held accountable by society for their role in causing the effects. From an economic point of view, regulations generally disadvantage small industries including farms and the impact of increased costs is felt most severely by low income people. ♦

ENVIRONMENTAL CONFERENCE: Industry Takes Initiative

High ranking government and business leaders will gather in Chicago Monday and Tuesday, Jan. 17 and 18 for a unique conference on how industries can reduce pollution and save money through process changes.

The conference, titled, "Beyond Environmental Regulations: Industry takes the Initiative," is expected to draw attendance from more than 300 top midwestern businessmen.

Raymond Bodnar, Environmental Manager for the Illinois State Chamber of Commerce, and Louis Lehr, president of U.S. Operations of the 3M Company, will be the keynote address team.

"We have found that if industry can design their equipment so it doesn't pollute, they can save on energy costs and possibly make a profit from former waste products," said George Alexander, Jr., Regional Administrator for the U.S. EPA.

The conference is cosponsored by the U.S. EPA, the U. S. Department of Commerce and various state business organizations.

The conference is scheduled for the O'Hare Regency Hyatt House, Chicago.

Pesticide Applicator

Continued from page 12

sessions have been held as yet. FUTURE TRAINING FUNDS

Extension Service personnel in all six States are concerned with the availability of training funds for FY 77 and beyond. Currently, the OPP FY 77 budget contains a request for \$4.2 million for certification and training. Unfortunately, there has not been a further breakdown of the funds; therefore, we do not know how much will be made available to Region V States for training or certification in the next fiscal year. ♦

FARMERS IN THE CLASSROOM

Much of the success of the pesticide applicator certification program depends on the cooperation between farmer and county agency, and whether private applicators will voluntarily attend the training sessions.

According to Dr. Edward McCoy, private applicator certification manager at Purdue University in Indiana, the reaction from farmers is quite positive. "Lots of farmers might not have been overwhelmed by the idea, but at the end of the program they went away feeling that it was constructive."

David Yeager, extension agent for Porter County in Valparaiso, Indiana said, "There is always a small percentage who don't see the need for the training. But this is a small recalcitrant segment, and we're hoping that once their neighbors go through the training, they'll be more willing."

Yeager conducted a training session last spring which approximately 50 farmers attended, and is now in the process of holding another session with a smaller group. "We try to do all the instruction in one 4½ to 5 hour session — no need for applicators to return if we can teach all the information one time."

Yeager's class covers eight aspects of pesticide instruction including the law governing pesticides, calibrating the pesticide application equipment, and the environmental effect of the pesticides on air, water and soil. Slides and tapes accompany the lecture.

"I enjoy conducting the training and it's very rewarding to hear a comment like 'Gee, I didn't know all that was on the label.' " ♦

BRIEFS



New "trade-off" policy announced

The EPA announced a new air-pollution enforcement policy recently that would permit a new industry that pollutes even in areas where Federal air-quality standards have not yet been met.

Under the policy, described as a compromise between no-growth and excessive air pollution, new industrial emissions would be permitted in places if equivalent reductions had been achieved in the same area, so that there would be no increase in pollution.

According to Robert Duprey, Region V Director of the Air and Hazardous Material Division, the new policy would affect only high areas of high pollution in Illinois and Indiana which have not yet met the EPA's health related air quality standards.

Duprey said such areas include northwestern Indiana, and southern sections of Ohio as well as parts of the East St. Louis area.

The Clean Air Act called for nationwide compliance with Federal Air Quality standards by mid-1975. The assumption has been that until they met the standards, major new industrial facilities would have to be virtually non-polluting.

John R. Quarles, EPA Deputy Administrator said, "In many cases, the additional emission reduction can be obtained by improvements in a facility already owned by the developer of the new plant.

Students study pollution from ship

As part of a \$250,000 experimental study of atmospheric pollution of Lake Michigan, a researchers team from Governors State University in Park Forest South, Illinois, will operate from a ship of the Environmental Protection Agency.

The three-year study also involving the University of Michigan and the University of Wisconsin will cover the atmospheric route for polluting load by lead, cadmium, and other materials.

At the same time, meteorological data bearing on the transport process over the lake will be collected from the National Weather Service and the U.S. Coast Guard as well as the air quality studies van of Governors State University.

Dr. Herman Sievering, professor of engineering science at GSU directs the university research with a team of four atmospheric science students.

The research team hopes to resolve the following questions

- the rate at which atmospheric particles of varying size are depositing into the lake.

- the rate at which certain pollutants associated with these particles are depositing

- the way atmospheric particles are transported over Lake Michigan by meteorological processes.

EPA issues notice to GM in Sandusky

The Midwest Regional EPA office has taken action to bring about cleanup of particulate emissions to the air from the New Departure-Hyatt Bearings Division of the General Motors Corporation located in Sandusky, Ohio.

A 30-day notice of violation of federally enforceable State air pollution regulations was issued to the facility by EPA Regional Enforcement Director, James O. McDonald.

The notice of Violation was directed at three coal-fired boilers emitting over 67 tons of particulate matter per year.

The regulations cited are part of the Ohio Air Implementation Plan developed by the State in accordance with the provisions of the Clean Air Act for attainment and maintenance of air quality standards and approved by the Federal Government.

Flunk standards . . . no travel

EPA Administrator Russell E. Train recently announced that his agency will not certify 1978 automobiles unless they meet the stringent emission standards required by the Clean Air Act for the 1978 model year.

The 94th Congress adjourned in October without enacting the Clean Air Amendments which would have extended the 1977 emission standards to 1978.

Under the present law, no 1978 model year cars may be sold in the U.S. unless they meet the statutory emission standards of 0.41 gm/m hydrocarbons, 3.4 gm/m carbon monoxide and 0.4 gm/m oxides of nitrogen.

Ohio sulfur oxide hearing

The Midwest Administrator of the U.S. Environmental Protection Agency recently charged Ohio power utilities, chemical, petroleum, steel and tire makers with the conspiring to keep Ohio's air dirty by fighting government efforts at air cleanup.

"They have put greed before the public health and welfare," said Regional Administrator George Alexander, on the eve of a major industry attempt to once again delay air cleanup in Ohio through appeals to the U.S. Sixth Circuit Court in Cincinnati.

"The power companies will be the losers in the end," warned Alexander, who vowed that EPA will fight to the U.S. Supreme Court, if necessary to bring clean air to Ohio. "Ohio is already four years late with sulfur oxide clean up plans," said Alexander. "Any further delays will sacrifice public health beyond reasonable limits."

Thirty-three major Ohio industries plus all investor owned utilities have challenged EPA sulfur oxide regulations in Ohio, which were the product of significant industry input.

The Ohio plan, the most sophisticated ever done by a governmental agency, will cost Ohio industries and cities about \$500 million capitol costs, with annual costs at \$379 million - both figures, half of original estimates,

and but a small fraction of projected capital expenditures.

"We cannot sacrifice the future of Ohio on the altar of profits," warned Alexander. "A conspiracy is apparent," said Alexander, "in that many of the industries involved in the challenge are either not effected at all or modestly affected by the EPA regulations.



Dead birds wash onto shore

Hundreds of dead loons and other birds have been washing up onto the southern and eastern shores of Lake Michigan recently, according to ornithologist Dr. William J. Beecher.

Although the exact cause of what is killing the birds is unknown, the U.S. Fish and Wildlife Service is inclined to think they are victims of type-E botulism poisoning, perhaps picked up by feeding on botulism tainted alewives.

The Michigan Department of Natural Resources counted 527 dead loons in an aerial survey from the Indiana state line north to Muskegon, Mi.

Tests are being run on the dead birds. Leonard Schumann from the Fish and Wildlife Service said that although there is no public health hazard, people should handle the birds with rubber gloves. If the birds are infected with botulism, people could pass it from hand to mouth.

Funding formula for planning grants amended

EPA recently announced it has established regulations in final form amending the allocation formula governing grants to designate State and local areawide water quality management agencies.

The regulations, which amend the State and Local Assistance grant rules, cover funding for developing and operating a continued waste treatment planning program under Section 208 of the Federal Water Pollution Control Act of 1972.

The new amendments are intended to make an equitable geographical distribution of funds, using a weighting of 85 percent based on net population and 15 percent on net land area.

The amendments also determine that decisions relating to 208 grants and discretion for distribution of allocated funds are the responsibility of EPA Regional Offices.

Non-point seminar recently held in Chicago

If farmers can be convinced to use known successful land conservation techniques, the sediment clogging of the Great Lakes can be cut 50 to 75 percent.

That statement was among the many exchanged when county and state officials, engineers and local water pollution control officials met in Chicago in Mid-November for a two-day seminar on best management practices for non-point source pollution control.

Seminar participants learned that EPA already has done its homework in learning which practical techniques will work in controlling erosion and silt loss. The workable techniques were amassed from four ongoing non-point source pollution studies.

The studies receiving the most attention at the seminar were the

Wisconsin Red Clay and Indiana Black Creek project. Problems of water quality caused by urban drainage were briefly explored by consultants during the Wisconsin project presentation.

All of the information was presented as a help for Section 208 planners and implementers.

The seminar brought farmers, county board members, technicians, county agents, and EPA officials together to mutually explore ways and means of applying techniques from successful demonstration models. As one participant said "We are ready to move. We don't need any more new studies. We need to work with farmers. It's time to start convincing . . . these projects help everyone. The technical data gives us a firm footing and the seminars show that we can all work together for better water quality."

Drinking water samples survey completed

The EPA recently announced the completion of a national survey of pesticides in drinking water. Three hundred and fifty water supplies were analyzed for the presence of aldrin, dieldrin, and DDT. Where detected, the substance were found only in concentrations at the parts per trillion level.

Sampling was conducted between February and August 1975. The results indicate that amounts generally found in drinking water are very small relative to other sources of human exposure (such as food residues). Levels in the general environment and drinking water are expected to decline naturally due to EPA bans on the use of these substances on food crops and in other uses. For example, the amount of dieldrin used in each of the past two years is only a

fraction of that used previously, and such use will drop further in the future. Therefore dieldrin levels in drinking water should decline concurrently.

Samples were taken in both raw and treated water in each of the water systems. A total of 689 such samples, plus a number of repeat or check system were analyzed. The results showed that 115 samples contained dieldrin at concentrations ranging from 4 parts per trillion to 80 parts per trillion. Of these 115 samples, one also contained aldrin. An additional 2 samples contained DDT.

The results of the survey localized into Region V showed that aldrin was found in Gillespie, Illinois. There were no samples in the region contained DDT. Three of the four places where dieldrin was found were in Gillespie, Decatur, and Nashville, Illinois.

The study included 89 water supplies within the U.S. and 13 in Region V. The breakdown was six in Illinois, five in Ohio, one each in Indiana and Michigan and none in either Minnesota or Wisconsin.



pesticides

Pesticides examined for nitrosamines

The EPA has received for testing 22 of an anticipated 24 samples of pesticides that might contain nitrosamines — chemical impurities highly suspect as human cancer agents.

EPA Administrator, Russell E. Train, said, "Analyzing these samples to determine if they contain nitrosamines is only one part of a broader program to learn the scope of the problem . . .

EPA's regional offices have been directed to take air and water samples from some of the plants producing these pesticides." Train said that EPA officials will meet with several producers of the pesticides to discuss the source of contamination and ways of avoiding it.

The 24 pesticides will be examined at an EPA lab in Beltsville, Md.

The pesticides are primarily agricultural weed killers, but some home lawn products and other pesticides are included as well.



toxicants

Westinghouse to phase out PCBs

PCBs (polychlorinated biphenyl) are being phased out at the Westinghouse Electric Company's plant in Bloomington, Indiana.

According to Don Sauter, the plant manager in Bloomington, PCB's will be replaced in 1977 by a biodegradable fluid, commercially known as WEM-COL. The replacement will begin in January.

Sauter was quoted as saying, "The replacement is a simple hydrocarbon with good environmental characteristics like similar to mineral oil."

High PCB concentrations resulted in a fishing ban in several streams in the area. The Indiana Environmental Management Board is in the process of conducting hearings on PCB pollution.

Michigan farmers examined for possible PBB effects

Michigan officials said last month that they underestimated the tragic dimensions of the PBB chemical disaster in Michigan.

New tales of suffering unfolded the first week in November as 1,000 farmers and farm family members gathered in Grand Rapids, Michigan for extensive physical examinations.

The physical examinations were conducted by a 35-member health research team headed by Dr. Irving J. Selikoff of New York's Mt. Sinai Medical Center.

Selikoff is the director of the Environmental Sciences Laboratory at Mt. Sinai. He is also EPA's international expert on the health effects of chemical carcinogenics or industrial contaminants.

The study included farmers and farm families that had eaten PBB infected meat, milk and produce from their farms.

Millions of pieces of data were collected in the six days of tests. The data will be analyzed by computer. Selikoff said it would probably take three months before any conclusions can be drawn from the data, but he would release information as it was compiled and analyzed.

During the six days of examinations, Dr. Sidney Diamond, one of two neurologists with the group said he had seen a large number of patients with a high incidence of central nervous system malfunctions.

Diamond said he was finding people suffering memory loss, lack of coordination, when using tools, numbness, deterioration in intelligence and attention spans, and increased sleep time.

Diamond also encountered card players who can no longer keep track of their playing hands, long-time farmers who can't plow a straight furrow, and drivers with formerly spotless records who suddenly began getting traffic tickets and having minor accidents.

Dr. Henry A. Anderson of the Mt. Sinai team said he had also found new abnormalities in the farm families of skin rashes and joint problems resembling arthritis in relatively young people.

Another doctor said he found a "classical case of chloracne" in one of the employees in the PBB making plant—The Michigan Chemical Company. Chloracne is a skin condition associated with exposure to halogenated hydrocarbons which are the main ingredient in PBBs.

Still unanswered are the questions of how long PBBs are retained in the human body and how long it takes for PBBs to effect the human nervous system and if there is a safe level of PBB concentrates in animals and animal products.

Researchers study PCBs in cattle

A two-phase study of the effect of PCBs (polychlorinated biphenyls) on beef cattle is in progress at the Lynnwood-Purdue Agricultural Center near Carmel in Indiana (north of Indianapolis).

Thirty steer and heifer calves and 15 pregnant cows will be used in the long-range research.

Purdue researchers are trying to seek answers to the following questions:

- Will beef cattle fed PCBs retain them in their bodies, and at what levels.

- If the cattle are contaminated, will their body level of contamination diminish after they are taken off PCB feed.

- Will pregnant brood cows transmit PCBs either to their unborn calves or subsequently through their milk in nursing calves.

The purpose of the investigation is to enable beef producers to comply with Food and Drug Administration regulations covering PCB levels in meat and to help protect our meat supply from contamination.



Facility for converting refuse to electricity opens

A new solid waste disposal plant, the largest of its kind in the country for converting refuse energy to electricity, was opened in Chicago recently by Mayor Richard J. Daley.

This new Supplementary Fuel Processing Facility, annually will process 250,000 tons of household refuse into a low-sulphur fuel which Commonwealth Edison Company will purchase to be used with coal for electricity production for 45,000 Chicago homes.

The Mayor said the "refuse to electricity plant" will save the city about \$600,000 each year in operating expenses compared with a conventional incinerator.

In addition, he pointed out, the City will be paid about \$700,000 annually by Commonwealth Edison for the supplemental fuel and will receive about \$200,000 annually from the sale of recovered metals.

The new plant will produce about \$900,000 a year in extra revenue for the city and save \$600,000 each year, the Mayor said. It also will conserve a substantial amount of energy.

FEDERAL REGISTER

October 14

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:
Inert ingredients in pesticide formulations, certain

October 13

Rules

Air quality implementation plans: Gasoline rationing regulations; removal

Proposed Rules

Water pollution; effluent guidelines for certain point source categories:
Cement manufacturing

Notices

Pesticide applicator certification; State plans:
Maryland

October 18

Notices

Environmental statements; availability of agency comments:
George Neal Steam-Electric Generating Station
Kraft Pulp Mills

October 19

Proposed Rules

Air quality implementation plans; various States, etc.:
North Dakota
Puerto Rico

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:
Sodium chlorate

Notices

Air quality standards; ambient monitoring applications:
Beckman Instruments, Inc

Food additive petitions:

Mobay Chemical Corp. et al
Pesticide chemicals, etc.; petitions:
Registration of benzene hexachloride; cancellation
Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:
3-phenoxyphenyl cis-trans-2-(2, 2-dichloroethenyl) -2, 2-dimethyl cyclopropanecarboxylate

Pesticide products containing benzene hexachloride; rebuttable presumption against registration of
Pesticide registration: Applications (2 documents)
Determination of claims for compensation filed against applications

Water pollution control: List of violating facilities

October 21

Rules

Air pollutants, hazardous; National emission standards:
Vinyl chloride

Notices

Minority business enterprises, proposed policy on use of architectural and engineering consultants; correction
Pesticide programs, food additive petitions:
Mobay Chemical Corp
Pesticides, specific exemptions and experimental use permits:
North Dakota State University

October 22

Rules

Procurement

Proposed Rules

Air pollution; standards of performance for new stationary sources:
Synthetic organic chemical manufacturing industry
Air quality implementation plans; various States, etc.:
Vermont

Notices

Air pollution; ambient air monitoring reference and equivalent methods

Environmental statements; availability of agency comments (2 documents)

Pesticide applicator certification; State plans:
South Dakota

Pesticide chemicals; tolerances, exemptions, etc.: petitions:
Herculite Protective Fabrics Corp

Pesticides; specific exemptions and experimental use permits:
California Department of Health

California State Department of Food and Agriculture
Idaho State Department of Agriculture

October 27

Proposed Rules

Pesticide chemicals in or on raw agricultural commodities; tolerances and exemptions, etc.:
Reformatting, columnar listings; inquiry

October 28

Notices

Air quality implementation plans:

Del Monte de Puerto Rico and Star-Kist Caribe, Inc., list of violating facilities

Air quality implementation plans, various States:
New Jersey

Meetings:

Environmental Health Advisory Committee Study Group on Metagenicity Testing

Pesticide applicators certification, State plans:
New York

October 29

Proposed Rules

Air pollution; standards of performance for new stationary sources:

Kraft pulp mills; correction

Notices

Pesticide chemicals; tolerances, exemptions, etc., petitions:
New York State Agricultural Experiment Station

November 3

Rules

Air pollution; standards of performance for new stationary sources:

California; authority delegation

Air pollution; hazardous; National emission standards:
California; authority delegation

Notices

Air pollution; standards of performance for new stationary sources:

California; authority delegation

November 4

Rules

Water pollution; effluent guidelines for certain point source categories:

Plastics and synthetics manufacturing; correction

Proposed Rules

Air pollution; standards of performance for new stationary sources:

Sulfuric acid mist control; emission guidelines

Notices

Meeting:

Environmental Health Advisory Committee

Pesticide registration:

Applications

Pesticides; specific exemptions and experimental use permits:
Oregon State Department of Agriculture



Left to right, top row: Ann Brash, Phyllis Kierig Second row: William Omohundro, Rebecca Schorin, Frank Corrado Bottom row: Kathy Brown, Jayne Kenneally, MaryEllen Sabella, Patricia Reape. Not shown: Theresa Brown, Lee Botts, Geraldine Hayes.

ENVIRONMENT MIDWEST
ENVIRONMENTAL PROTECTION AGENCY
Office of Public Affairs
230 South Dearborn
Chicago, Illinois 60604
THIRD CLASS

POSTAGE AND FEES PAID
ENVIRONMENTAL PROTECTION AGENCY

EPA-335



*U.S. Government Printing Office: 1976 - 750-026 P. O.: NO. 2/Regional V-1.

Return this sheet if you do NOT wish to receive this material, or if a change of address is needed. (Indicate change, including zip code.)